File #: O2017-7093, **Version:** 1

SUBDIVISION ORDINANCE

Be it Ordained by the City Council of the City of Chicago:

SECTION 1. The Commissioner of the Chicago Department of Transportation, or any of her designees, is each hereby authorized and directed to approve a proposed New City Subdivision being a vertical subdivision of certain lots owned by 1515 N. Halsted LLC, a Delaware limited liability company ("Developer") in the block bounded by N.. Clybourn Avenue, N. Halsted Street and N. Ogden Avenue, and generally W. Schiller Street as legally described in the attached plat (Exhibit A, CDOT File: 04-27-17-3808) which, for greater certainty, is hereby made a part of this ordinance.

SECTION 2. The subdivision herein provided for is made upon the express condition that within one hundred eighty (180) days after the passage of this ordinance, the Developer shall file or cause to be filed for recordation with the Office of the Recorder of Deeds of Cook County, Illinois a certified copy of this ordinance, together with the full sized corresponding Plat approved by the Department of Transportation's Acting Superintendent of Maps and Plats.

SECTION 3. This ordinance and subdivision plat exhibit shall take effect and be in force from and after their recording.

Alderman, 27th Ward

1. SEE SHEETS 24-25 FOR LEGAL DESCRIPTIONS.
2. SEE SHEETS 2-15 FOR PROPOSED LOTS.
3. SEE SHEETS 16-21 FOR 3D DRAWINGS.
4. CUT CROSSES OR 1" IRON PIPES HAVE BEEN SET AT ALL EXTERIOR LOT CORNERS.

PROJECT/FILE #: 14-27-17-3808
CDOT#: 14-27-17-3808 REV. 09-15-2017

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodhdge, IL 60517 630.724.9200 voice 630.724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR AND MAIL TO: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 1 OF 26

FXHIRIT A

LOT DESCRIPTION LOT NO. SQ. FT. ACRES

RETAIL - LOADING DOCK	1	54,886	1.2600
"A BUILDING"	2	44,947	1.0318
"C BUILDING"	3	74,709	1.7151
"B BUILDING" - RETAIL	4	29,109	0.6683
RESIDENTIAL STORAGE	5	7,092	0.1628
RETAIL PARKING GARAGE	7	38,332	0.8800
COMMON AREA	8	4,858	0.1115
PLAZA	9	43,155	0.9907
MARIANO'S COURTYARD	10	10,844	0.2489
"PAD D"	12	26,165	0.6007
TOTAL LOWER LEVEL		334,097	7.6698

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 2 OF 26

EXHIBIT A

PLAT OF SUBDIVISION

A=31.91' -CB=S67°18'10"W R=21.83'

NEW CITY

LOWER LEVEL

N89°57'46"W 29.11'

S45°05'38"W "30 82'
S67°31'56"W "26.34'

N89°57'46"W 17.44'

LEGEND

EXISTING BOUNDARY LINE PROPOSED LOT LINE NORTH SOUTH EAST WEST
ARC LENGTH RADIUS
CHORD BEARING
N S E W A R CB

N44°57'46"W 11.67'
S44°57'46"E_^£> 11.51' "

N35°02'51"E 9.00'

25.63'
S00°02'14"W 8.59'

LOT DIMENSIONS

N00°02'14"E 30.42'

NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

CDOT#: 14-27-17-3808 REV. 09-15-2017

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=100' DATE: 06-21-16 SHEET: 3 OF 26

FXHIRIT A

LOT DESCRIPTION	LOT NO.	SQ. FT.	ACRES
"A BUILDING"	2	55,554	1.2753
"C BUILDING"	3	84,489	1.9396
"B BUILDING" - RETAIL	4	41,976	0.9636
RESIDENTIAL LOBBY	5	2,099	0.0482
RETAIL PARKING GARAGE	7	57,014	1.3089
COMMON AREA	8	4,858	0.1115
PLAZA	9	51,098	1.1731
MARIANO'S COURTYARD	10	10,844	0.2489
"PAD D"	12	26,165	0.6007
TOTAL GROUND FLOOR		334,097	7.6698

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 4 OF 26

FXHIRIT A

PLAT OF SUBDIVISION

NEW CITY

GROUND FLOOR

N89°57'46"W 574.88'

LOT DIMENSIONS

3 C

NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM
GROUP NO. VP04.1
SCALE: 1"=100'
DATE: 06-21-16
SHEET: 5 OF 26

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Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE. 1"=120' DATE: 06-21-16 SHEET: 6 OF 26

FXHIRIT A

PLAT OF SUBDIVISION
NEW CITY
2nd FLOOR

S45°05'38"W " 30.82'
N89°57'46"W 574.88'

LOT DIMENSIONS

NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=100' DATE: 06-21-16 SHEET: 7 OF 26

EXHIBIT A

W: WEED ST.

W. BLACKHAWK ST.

W. EASTMAN ST.

NOTE:

LOT DESCRIPTION LOT NO. SQ. FT. ACRES

"A BUILDING"	2	55;554	1.2753
"C BUILDING"	3	84,489	1.9396
"B BUILDING" - RETAIL	4R	37,199	0.8540
"B BUILDING" - OFFICE	6	6, 876	0.1578
RETAIL PARKING GARAGE	7	57,014	1.3089
COMMON AREA	8	4,858	0.1115
PLAZA	9	51,098	1.1731
MARIANO'S COURTYARD	10	10,844	0.2489
"PAD D"	12	26,165	0.6007
TOTAL 3rd FLOOR		334,097	7.6698

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 8 OF 26

EXHIBIT A
PLAT OF SUBDIVISION
NEW CITY
3rd FLOOR

S45°05'38"W " 30.82'
N89°57'46"W 574.88'

LOT DIMENSIONS

NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135
PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=100' DATE: 06-21-16 SHEET: 9 OF 26

FXHIRIT A

LOT DESCRIPTION	LOT NO.	SQ. FT.	ACRES
"A BUILDING"	2	55,554	1.2753
"C BUILDING"	3	84,489	1.9396
"B BUILDING" - RESIDENTIAL	5	44,075	1.0116
RESIDENTIAL PARKING	5RP	57,014	1.3089
COMMON AREA	6	4,858	0.1115
PLAZA	9	51,098	1.1731
MARIANO'S COURTYARD	10	10,844	0.2489
"PAD D" 12		26,165	0.6007
TOTAL 4th FLOOR	334,097 7.6698		

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 10 OF 26

FXHIRIT A

PLAT OF SUBDIVISION

NEW CITY

4th FLOOR/ 5th FLOOR RESIDENTIAL PARKING

S45°05'38"W 30.82'
N S E W A R
CB
N89°57'46"W 574.88'

LOT DIMENSIONS

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NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodridge. IL 60517 630.724.9200 voice 630.724.0384 fax v3oo.com <http://v3oo.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=100' DATE: 06-21-16 SHEET: 11 OF 26

LOT DESCRIPTION	LOT NO.	SQ. FT.	ACRES
"A BUILDING"	2	55,554	1.2753
"C BUILDING"	3	84,489	1.9396
"B BUILDING" - RESIDENTIAL	5	30,590	0.7022
"B BUILDING" - RES'D TOWER	5T	13,485	0.3096
RETAIL PARKING GARAGE	7	57,014	1.3089

COMMON AREA	8	4,858	0.1115
PLAZA	9	51,098	1.1731
MARIANO'S COURTYARD	10	10,844	0.2489
"PAD D"	12	26,165	0.6007
TOTAL 5th - 19TH FLOOR		334,097	7.6698

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 12 OF 26

FXHIRIT A

PLAT OF SUBDIVISION

NEW CITY

5th- 19th FLOOR

S45°05'38"W 30.82'
N89°57'46"W 574.88'

LOT DIMENSIONS

NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodridge. IL 60517 630.724.9200 voice 630.724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=100' DATE: 06-21-16 SHEET: 13 OF 26

FXHIRIT A

LOT DESCRIPTION	LOT NO.	SQ. FT.	ACRES
"A BUILDING"	2	55,554	1.2753
"C BUILDING"	3	84,489	1.9396
"B BUILDING" - RESIDENTIAL	5	38,481	0.8834
RETAIL PARKING GARAGE	7	57,014	1.3089
COMMON AREA	8	4,858	0.1115
PLAZA	9	51,098	1.1731 '
MARIANO'S COURTYARD	10	10,844	02489
"B BUILDING" - MECHANICAL	11	5,594	0.1284
"PAD D"	12	26,165	0.6007
TOTAL 20th FLOOR		334,097	7.6698

Engineers Scientists Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=120' DATE: 06-21-16 SHEET: 14 OF 26

EXHIBIT A

PLAT OF SUBDIVISION

NEW CITY

20th FLOOR

N89°57'46"W 574.88'

LOT DIMENSIONS

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o 5 c

NOTE:
UNLESS LABELED OTHERWISE, LOT LINES ARE PERPENDICULAR AND /OR PARALLEL.

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodridge, IL 60517 630.724.9200 voice 630.724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=100' DATE: 06-21-16 SHEET: 15 OF 26

EXHIBIT A

PLAT OF SUBDIVISION

NEW CITY

LOT 1

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EXISTING BOUNDARY LINE AT GROUND FLOOR

- PROPOSED LOT LINE

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CDOT#14-27-17-3808 REV.09-15-2017

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7325 Janes Avenue. Su<fe 100 Woodridge. IL 60517 630 724 9200 woe 630 72A 0364 lax v3co com

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=150' DATE: 06-21-16 SHEET: 16 OF 26

EXHIBIT A

PLAT OF SUBDIVISION

NEW CITY

LOTS 2, 3, 4

LEGEND

EXISTING BOUNDARY LINE AT GROUND FLOOR

- PROPOSED LOT LINE

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CDOT#14-27-17-3808 REV. 09-15-2017

Engineers Scientists (<\ 23? Surveyors

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PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE. SUITE 2130 CHICAGO. IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1 "=150" DATE: 06-21-16 SHEET: 17 OF 26

EXHIBIT A

PLAT OF SUBDIVISION

NEW CITY

LOTS 5, 5RP AND 5T

LEGEND

EXISTING BOUNDARY LINE AT GROUND FLOOR

- PROPOSED LOT LINE

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CDOT#14-27-17-3808 REV.09-15-2017

Engineers Scientists [/\ 1W Surveyors

7325 Jones Avenue. Suite 100 Woodnage. IL 60517 630 72<S 9200 voice 630 724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR. BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135
PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=150' DATE: 06-21-16 SHEET: 18 OF 26

EXHIBIT A

PLAT OF SUBDIVISION
NEW CITY

LEGEND

EXISTING BOUNDARY LINE AT GROUND FLOOR

- PROPOSED LOT LINE

CDOT#14-27-17-3 808 REV.09-15-2017

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7325 Janes Avenue. Suite 100 Woodridge. IL 6051T 630.721 9200 voice 630.724 0384 lax v3co com

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM
GROUP NO. VP04.1
SCALE: 1"=150'
DATE: 06-21-16
SHEET: 19QF2g

EXHIBIT A

PLAT OF SUBDIVISION
NEW CITY

LEGEND

EXISTING BOUNDARY LINE AT GROUND FLOOR

- PROPOSED LOT LINE

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CDOT#14-27-17-3808 REV.09-15-2017

Engineers Scientists Surveyors

7325 Janes Avenue. Suite 100 Wcodndge. IL 60517 630 721 9200 voice 630 721 03M lax v3co com

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. 07214.BRM GROUP NO. VP04.1 SCALE: 1"=150' DATE: 06-21-16 SHEET: 20 OF 26

EXHIBIT A

PLAT OF SUBDIVISION
NEW CITY

LOTS 8, 9, 10

LEGEND

EXISTING BOUNDARY LINE AT GROUND FLOOR

- PROPOSED LOT LINE

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Engineers Scientists Surveyors

7325 Janes Avenue. Suite 100 Woodridge. IL 6057 7 630 724 9200 voice 630 724.0334 lax v3co com

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PROJECT NO. 07214.BRM
GROUP NO. VP04.1
SCALE: 1"=150'

DATE: 06-21-16
SHEET: 21 OF 2g

CDOT#14-27-17-3808 REV.09-15-2017 "B™

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO. IL 60606 312-260-1135

FXHIRIT A

PLAT OF SUBDIVISION

NEW CITY

PART OF THE NORTHWEST QUARTER OF SECTION 4. TOWNSHIP 39 NORTH, RANGE 14 EAST OF THE THIRD PRINCIPAL MERIDIAN.

17-04;
17-04-17-04-17-04-17-04-17-04-17-04-17-04-17-04-

P.I.N.(S):

112-001 112-041 112-042 112-043 112-044 112-045 112-046 112-047 112-048

112-049 112-050 112-051 112-052 112-053 112-054 112-055 112-056

CITY-DEPT. OF FINANCE

C.D.O.T.

CDOT#: 14-27-17-3808 REV. 09-15-2017

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodridge, IL 60517 630.724.9200 voice 630.724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO. GROUP NO. SCALE: N/A DATE: 06-21-16 SHEET: 22 OF 26

EXHIBIT A

PLAT OF SUBDIVISION

NEW CITY

OWNER'S CERTIFICATE

, HEREBY CERTIFIES THAT IT IS OWNER OF THE PROPERTY DESCRIBED HEREON AND THAT AS SAID OWNER IT HAS CAUSED SAID PROPERTY TO BE SURVEYED AND SUBDIVIDED AS SHOWN ON THE PLAT HEREON DRAWN

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, SAID PROPERTY IS LOCATED WITHIN THE BOUNDARIES OF SCHOOL DISTRICT NO. 299 AND COMMUNITY COLLEGE DISTRICT #508.

BY

NAME:.

ITS.

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF

A NOTARY PUBLIC IN AND FOR SAID COUNTY. IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT PERSONALLY KNOWN TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT. APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE SIGNED AND DELIVERED THIS INSTRUMENT AS HIS/HER OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH

GIVEN UNDER MY HAND AND SEAL, THIS

NOTARY PUBLIC COMMISSION EXPIRES

MORTGAGEE CERTIFICATE

, AS MORTGAGEE, UNDER THE PROVISIONS OF A CERTAIN MORTGAGE DATED AS OF
THE RECORDER'S OFFICE OF COOK COUNTY, ILLINOIS AS DOCUMENT NO
DRAWN HEREON AND AGREES THAT ITS MORTGAGE IS HEREBY SUBORDINATED TO SUCH SUBDIVISION AND THE PLAT

DATED THIS DAY OF 20

BY

NAME ITS.

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS
) SS
COUNTY OF

I, , A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, DO HEREBY CERTIFY THAT PERSONALLY KNOWN TO ME AS THE OF . APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE SIGNED AND DELIVERED THIS INSTRUMENT AS HIS/HER OWN FREE AND VOLUNTARY ACT OF SAID OWNER AS AFORESAID.

DATED THIS

NOTARY PUBLIC

CDOT#: 14-27-17-3808 REV. 09-15-2017

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodridge, IL 60517 630.724.9200 voice 630.724.0384 tax v3co.com <http://v3co.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO GROUP NO. SCALE: N/A DATE: 06-21-16 SHEET: 23 OF 26

FXHIRIT A

PLAT OF SUBDIVISION
NEW CITY

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

THIS IS TO CERTIFY THAT I, CHRISTOPHER D BARTOSZ, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3198, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1:

THAT PART OF THE TRACT OF LAND, COMPRISING ALL OF THE LOTS, STREETS AND ALLEYS, WHICH LIES NORTH OF THE NORTH LINE OF WEST SCOTT (VEDDER) STREET, EAST OF THE EAST LINE OF NORTH HALSTED STREET, SOUTHWESTERLY OF THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE AND NORTHWESTERLY OF THE NORTHWESTERLY LINE OF NORTH OGDEN AVENUE, BEING ALL OR PART OF LOTS 87, 89, 91 AND 93 THROUGH 116, BOTH INCLUSIVE, IN BUTTERFIELD'S ADDITION TO CHICAGO PER ANTE-FIRE PLAT IN THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 4, TOWNSHIP 39 NORTH, RANGE 14 EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH PART OF SAID TRACT IS BOUNDED AND DESCRIBED AS FOLLOWS. BEGINNING AT THE INTERSECTION OF THE EAST LINE OF NORTH HALSTED STREET (66 FEET WIDE) WITH THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE (66 FEET WIDE) AND RUNNING. THENCE SOUTH ALONG THE EAST LINE OF SAID NORTH HALSTED STREET, A DISTANCE OF 408.00 FEET TO A POINT; THENCE EAST ALONG A STRAIGHT LINE, PERPENDICULAR TO SAID EAST LINE OF NORTH HALSTED STREET, A DISTANCE OF 407.92 FEET TO AN INTERSECTION WITH THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE AND THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE, A DISTANCE OF 576.94 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS, SAID PARCEL CONTAINS 83068 S.F., 1.9070 ACRES, MORE OR LESS

PARCEL 2:

THAT PART OF A TRACT OF LAND COMPRISING ALL OF LOTS, STREET AND ALLEYS, WHICH LIES NORTH OF THE NORTH LINE OF WEST SCOTT (VEDDER) STREET, EAST OF THE EAST LINE OF NORTH HALSTED STREET, SOUTHWESTERLY OF THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE AND NORTHWESTERLY OF THE NORTHWESTERLY LINE OF NORTH OGDEN AVENUE. BEING ALL OR PART OF LOTS 87, 89, 91 AND 93 THROUGH 116 BOTH INCLUSIVE, IN BUTTERFIELD'S ADDITION TO CHICAGO PER ANTE-FIRE PLAT IN THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 4. TOWNSHIP 39 NORTH, RANGE 14 EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH PART OF SAID TRACT IS BOUNDED AND DESCRIBED AS FOLLOWS

BEGINNING ON THE EAST LINE OF NORTH HALSTED STREET (66 FEET WIDE), AT A POINT WHICH IS 408.00 FEET SOUTH OF THE INTERSECTION OF SAID EAST LINE OF NORTH HALSTED STREET WITH THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE (66 FEET WIDE) AND RUNNING, THENCE EAST ALONG A STRAIGHT LINE, PERPENDICULAR TO SAID EAST LINE OF NORTH HALSTED STREET, A DISTANCE OF 407.92 FEET, TO AN INTERSECTION WITH THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE; THENCE SOUTHEASTWARDLY ALONG SAID SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE, A DISTANCE OF 303.19 FEET TO AN INTERSECTION WITH THE NORTHWESTERLY LINE OF NORTH OGDEN AVENUE AS OPENED BY ORDINANCE PASSED BY THE CITY COUNCIL FEBRUARY 18, 1919; THENCE SOUTHWESTWARDLY ALONG SAID NORTHWESTERLY LINE OF NORTH OGDEN AVENUE, A DISTANCE OF 343.08 FEET, TO AN INTERSECTION WITH A STRAIGHT LINE, WHICH IS PERPENDICULAR TO SAID EAST LINE OF NORTH HALSTED STREET AT A POINT 923.00 FEET SOUTH OF THE INTERSECTION OF SAID EAST LINE OF NORTH HALSTED WITH SAID SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE; THENCE WEST ALONG SAID LAST DESCRIBED PERPENDICULAR LINE, A DISTANCE OF 456.91 FEET, TO SAID EAST LINE OF NORTH HALSTED STREET AND THENCE NORTH ALONG THE EAST LINE OF NORTH HALSTED STREET, A DISTANCE OF 515.00 FEET, TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS, SAID PARCEL CONTAINS 271442 S.F., 6.2314 ACRES, MORE OR LESS

PARCEL 3:

ALL THAT PART OF NORTH OGDEN AVENUE AS OPENED BY ORDINANCE EXTENDING NORTH OGDEN AVENUE FROM WEST RANDOLPH STREET AND WEST BYRON PLACE TO NORTH CLARK STREET AND CENTER STREET, PASSED FEBRUARY 18, 1919, ORDER OF POSSESSION DATED MARCH 1, 1945 COUNTY COURT GENERAL NUMBER 42162 SAID PART OF NORTH OGDEN AVENUE COMPRISING PART OF WEST SCHILLER STREET, FORMERLY UHLAND STREET, PART OF LANGDON STREET, A NORTHWESTERLY / SOUTHEASTERLY 8 FOOT PUBLIC ALLEY, PART OF LOTS 4 THROUGH 16, BOTH INCLUSIVE, C. J. HULL'S SUBDIVISION OF LOTS 115 AND 117 IN BUTTERFIELD'S ADDITION TO CHICAGO PER ANTE-FIRE PLAT IN THE NORTHWEST 1/4 OF SECTION 4, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS AND PART OF LOTS 1 AND 2 IN ASSESSORS DIVISION OF LOT 114 IN BUTTERFIELD'S ADDITION TO CHICAGO AFORESAID, THE NORTHWESTERLY LINE OF SAID NORTH OGDEN AVENUE DESCRIBED IN SAID OPENING ORDINANCE AS "A LINE DRAWN THROUGH A POINT IN THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE 97.88 FEET NORTHWESTERLY OF THE NORTHWESTERLY LINE OF LANGDON STREET AS MEASURED ALONG THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE AND THROUGH A POINT IN THE NORTH LINE OF REES STREET 229.0 FEET EAST OF THE EAST LINE OF NORTH HALSTED STREET', FOR THE PURPOSES OF THIS DESCRIPTION THE NORTHWESTERLY LINE OF NORTH OGDEN AVENUE HAVING AN ASSUMED BEARING OF SOUTH 28 DEGREES, 49 MINUTES, 03 SECONDS WEST, SAID PART OF NORTH OGDEN AVENUE AFORESAID BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF NORTH OGDEN AVENUE AND THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE; THENCE SOUTH 28 DEGREES, 49 MINUTES, 03 SECONDS WEST FOR A DISTANCE OF 343.08 FEET; THENCE SOUTH 61 DEGREES, 10 MINUTES, 57 SECONDS EAST FOR A DISTANCE 50.0 FEET; THENCE NORTH 28 DEGREES, 49 MINUTES, 03 SECONDS EAST FOR A DISTANCE OF 328.57 FEET TO AN INTERSECTION WITH THE SOUTHEASTERLY EXTENSION OF THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE; THENCE NORTH 44 DEGREES, 59 MINUTES, 42 SECONDS WEST ALONG SAID SOUTHEASTERLY EXTENSION OF THE SOUTHWESTERLY LINE OF NORTH CLYBOURN AVENUE, A DISTANCE OF 52.06 FEET TO THE PLACE OF BEGINNING, SAID PARCEL CONTAINS 16805 S.F., 0.3858 ACRES, MORE OR LESS.

CDOT #: 14-27-17-3808 REV. 09-15-2017

Engineers Scientists Surveyors

7325 Janes Avenue, Su;(e 100 Woodridge, IL 60517 630.724.9200 voice 630.724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT

71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO GROUP NO. SCALE: N/A DATE: 06-21-16 SHEET: 24 OF 26

FXHIRIT A

PLAT OF SUBDIVISION

NEW CITY

EXCEPTING THEREFROM THE AFOREMENTIONED PARCELS 2 AND 3 THE FOLLOWING PARCEL:

THE LAND SUBJECT TO THE PLAT OF DEDICATION TO THE CHICAGO DEPARTMENT OF TRANSPORTATION FOR PUBLIC STREET (W SCHILLER STREET) RECORDED DECEMBER 1, 2008 AS DOCUMENT NO. 0833603083 AND DESCRIBED AS:

A STRIP OF LAND LOCATED IN THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION POINT OF THE EAST RIGHT OF WAY LINE OF NORTH HALSTED STREET AND THE NORTH LINE OF NORTH TOWN VILLAGE, A SUBDIVISION OF PART OF THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 39 NORTH RANGE 14 EAST OF THE THIRD PRINCIPAL MERIDIAN, RECORDED MARCH 20, 2000 AS DOCUMENT NUMBER 00195900 IN THE OFFICE OF THE RECORDER OF COOK COUNTY, ILLINOIS, SAID POINT BEING DISTANT SOUTH 00 DEGREES 02 MINUTES 14 SECONDS WEST 923.00 FEET FROM THE INTERSECTION OF THE EAST RIGHT OF WAY LINE OF NORTH HALSTED STREET WITH THE WESTERLY RIGHT OF WAY LINE OF NORTH CLYBOURN AVENUE; THENCE NORTH 00 DEGREES 02 MINUTES 14 SECONDS EAST, 49 31 FEET ALONG SAID EAST RIGHT OF WAY LINE FOR THE PLACE OF BEGINNING; THENCE CONTINUING NORTH 00 DEGREES 02 MINUTES 14 SECONDS EAST, 66.00 FEET; THENCE SOUTH 89 DEGREES 57 MINUTES 46 SECONDS EAST, 574.88 FEET, TO THE NORTHERLY RIGHT OF WAY LINE OF OGDEN AVENUE; THENCE SOUTH 28 DEGREES 20 MINUTES 34 SECONDS WEST, 121.29 FEET ALONG SAID NORTHERLY RIGHT OF WAY LINE; THENCE NORTH 0 DEGREES 02 MINUTES 14 SECONDS EAST, 40.79 FEET; THENCE NORTH 89 DEGREES 57 MINUTES 46 SECONDS WEST, 517.37 FEET, TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS, SAID PARCEL CONTAINS 37217 S.F., 0 8544 ACRES, MORE OR LESS.

I FURTHER CERTIFY THAT THE ANNEXED PLAT IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF. PERMANENT MONUMENTS WILL BE SET AT ALL EXTERIOR BOUNDARY CORNERS AT GROUND LEVEL.

I FURTHER CERTIFY THAT THE ABOVE DESCRIBED PROPERTY IS IN AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN (ZONE X) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP OF COOK COUNTY, ILLINOIS AND INCORPORATED AREAS (COMMUNITY PANEL NO.17031C0417J) MAP REVISED AUGUST 19, 2008.

OR THEIR AGENT TO FILE THIS PLAT OF SUBDIVISION WITH THE COOK COUNTY

K CONDUCTED ON OCTOBER ^2015. 3 I^DAYOF^nfft'n

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEYS. FIELD WORK

CONDUCTED ON OCTOBERS, 2Q15. DATED THIS]

CHRISTOPHER D. BARTOSZ
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3189 MY LICENSE EXPIRES ON NOVEMBER
30, 2018.
V3 COMPANIES OF ILLINOIS, LTD. PROFESSIONAL DESIGN FIRM NO. 184000902 THIS DESIGN FIRM NUMBER EXPIRES APRIL 30, 2019. cdbartosz@ v3co. com

ADDITIONAL SURVEYOR NOTES: -EXISTING ZONING IS PD 1075 -EXISTING
SCHOOL DISTRICT 299 -EXISTING COMMUNITY COLLEGE DISTRICT 508
-ALL MEASUREMENTS ARE MEASURED UNLESS SHOWN AS RECORD (XXX) -FIELD WORK CONDUCTED ON
OCTOBER 1, 2015.
-ALL OF OR PORTIONS OF LOTS MENTIONED IN THE LEGAL FALL WITHIN THE PROPERTY BEING SUBDIVIDI 99-115 IN BUTTERFIELD'S ADDITION.
31 t 3 Q >
c
i

CDOT#: 14-27-17-3808 REV. 09-15-2017

Engineers Scientists Surveyors

7325 Janes Avenue, Suite 100 Woodridge, IL 60517 630.724.B200 voice 630.724.0384 fax v3co.com <http://v3co.com>

PREPARED FOR: BUSKSBAUM RETAIL MANAGEMENT
71 SOUTH WACKER DRIVE, SUITE 2130 CHICAGO, IL 60606 312-260-1135

PROJECT NO GROUP NO. SCALE: N/A DATE: 06-21-16 SHEET: 25 OF 26

EXHIBIT A

ALTAMC8M LAND TITLE I FDR

AL HAL81

PREPARED FOR AND MAIL TO: BUSKSBAUM RETAIL MANAGEMENT - 71 S. WACKER DR SUITE 2130, CHICAGO, IL. 60606

JU.TM.irm <http://JU.TM.irm> I LUO TTTU aURVBV

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 10-Q

Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended June 30, 2017

Commission file number 1-5805

JPMorgan Chase & Co.

(Exact name of registrant as specified in its chart.

Delaware (State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)

270 Park Avenue, New York, New York 10017 (Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (212) 270-6000

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

LEI Yes □ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

LE] Yes □ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	LE]	Accelerated filer □
Non-accelerated filer (do not check if a smaller reporting company)	□	Smaller reporting company □
		Emerging growth company [~J

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. □

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

□ Yes LEI No

Number of shares of common stock outstanding as of June 30, 2017: 3,518,964,410

FORM 10-Q TABLE OF CONTENTS

JPMorgan Chase & Co.
Consolidated financial highlights

(unaudited) : ":. ■ v .. V-'^. '^i.: . • ■' V.'. , ., ' lAs of.or.for the.pe'riod ended; .
; (in millions, except per share, ratio, headcoum data and where ^otherwisenoted)-'.. ... .. '

Selected income statement data
Total net revenue
Total noninterest expense
Pre-provision profit
Provision for credit losses
Income before income tax expense
Income tax expense

2017

25,470 14.506
10,964 1.215
9,749 2,720

1017.

24,675 15.019
9,656 1.315
8.341 1.893

,.4016

23.376 13.833

9,543 864

8.679 1.952

3016-

24.673 14,463
10,210 1.271
8,939 2.653

;2016:

24.380 13.638
10.742 1.402
9.340 3.140
2017
; Six months ended' . . June 30;-. '- ■
50,145 29.525
■2016.;
20.144 3.226

47,619 27.475
16.918 5,198
20,620 2.530
18,090 4,613
Net income
Earnings per share data Net income: Basic
Diluted Average shares: Basic
Diluted
Market and per common share data Market capitalization Common shares at period-end Share price:'"
High
Low
Close Book value per share
Tangible book value per share ("TBVPS")""
Cash dividends declared per share
Selected ratios and metrics
Return on common equity ("ROE")
Return on tangible common equity ("ROTCE")""
Return on assets
Overhead ratio
Loans-to-deposits ratio
High quality liquid assets ("HQLA") (in billions)"[1]
Common equity Tier] ("CETI") capital ratio""
Tier 1 capital ratio""
Total capital ratio"[1]
Tier 1 leverage ratio""
Selected balance sheet data (period-end)
Trading assets
Securities
Loans
Core loans

Average core loans Total assets Deposits
Long-term debt"1' Common stockholders' equity Total stockholders' equity Headcount
Credit quality metrics
Allowance for credit losses
Allowance for loan losses to total retained loans
Allowance for loan losses to retained loans excluding purchased credit-impaired loans"1
Nonperforming assets
Net charge-offsIB
Net charge-off rate"1

1.66 1.6S 3.601.7 3,630.4

312,078 3.552.8

93.98 83.03 87.84 64.68 52.04 0.50

11% 13 1.03 61 63
$ 528 !
12.5% 14.3 15.6 8.4

S 402.513 I 281.850 895.974 812,119 805.382 2.546.290 1,422.999 289,492 229,795 255,863 246,345

14.490 1.52%

1.31 6,826 1.654 0.76%

1.73 1.71 3.611.3 3.646.6

307.295 3,561.2

87.39 ! 66.10 86.29 64.06 51.44 0.48

11% 14 1.06
59 65
S 524 I
12.4% 14.1 15.5 8.4

J 372.130 S 289.059 894,765 806.152 799.698 2.490.972 1.375.179 295,245 228,122 254,190 243,355

t 14.854 1.55%

1.34 I 7.535 1,280 0.58%

1.60 1.58 3.637.7 3,669.8

238,277 3.578.3

67.90 58.76 66.59 63.79 51.23 0.48

10% 13 1.01 59 65

$ 539 12.0% 13.6 15.1 8-5,

i 374,837 ! 272,401 888,054 795.077 779.383 2,521,029 1.376.138 309,418 228.263 254,331 242,315

t 15,304 ! 1.61%

1.37 t 7.779 ! 1,121 0.51%
7,029 j 6.448 $ 6,727 t 6.286 $

f, 1.83 1.82 3,574.1 3,599.0

321,633 3,519.0

t 92.65 81.64 91.40 66.05 53.29 0.50

12% 14 1.10 57 63
S 577 !
12.6% 14.4 16.0 8.5

! 407,064 I
263,458
908,767
834,935
824,583 2,563,174 1,439,473
292,973

232,415
258,483
249,257

S 14,480 $ 1.49%

1.28 ! 6,432 { 1,204 0.54%
13,477 $ 11.720

3.49 :
3.47 3,587.9 3,614.7

321,633 3,519.0

93.98 : 81.64 91.40 66.05 53.29 1.00

11%
14 1.07
59
63 577 : 12.6% 14.4 16.0 8.5

407,064 !
263,458
908,767
834,935
815,034 2,563,174 1,439,473
292.973
232,415
258,483
249,257

14,480 $ 1.49%

1.28 6,432 % 2,858 0.65%

a) Share prices are from the New York stock Exchange.
b) TBVPS and ROTCE are non-GAAP financial measures For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 15-17.
c) HQLA represents the amount of assets that qualify for inclusion m the liquidity coverage ratio CLCR"). For additional information, see HQLA on page 67.
d) Ratios presented are calculated under the Basel lit Transitional capital rules and for the capital ratios represent the lower of the Standardized or Advanced approach as required by the Collins Amendment of the Dodd-FranK Act (the "Collins Floor"). See Capital Risk Management on pages 42-48 for additional information on Basel HI and the Collins Floor.
e) Included unsecured long-term debt of $221.0 billion. $212.0 billion. $212.6 billion, $226.3 billion and $220.6 billion at June 30. 2017, March 31. 2017. December 31. 2016. September 30. 2016 and June 30, 2016, respectively.
f) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures and Key Performance Measures on pages 15-17. For further discussion, see Allowance for credit losses on pages 63-65.
g) Excluding net charge-offs of $467 million related to the student loan portfolio transfer, the net charge-off rates for both the three months ended March 31, 2017 and six months ended June 30, 2017 would have been 0 54%.

INTRODUCTION

The following is management's discussion and analysis CMD&A") of the financial condition and results of operations ofJPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") for the second quarter of 2017.

This Form 1O-Q should be read in conjunction with JPMorgan Chase's Annual Report on Form 1O-K for the year ended December 31, 2016, filed with the U.S. Securities and Exchange Commission ("2016 Annual Report" or 2016 "Form 10-K"). to which reference is hereby made. See the Glossary of terms and acronyms on pages 168-175 for definitions of terms and acronyms used throughout this Form 10-Q.

The MD&A included in this Form 10-Q contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. For a discussion of certain of those risks and uncertainties and the factors that could cause JPMorgan Chase's actual results to differ materially because of those risks and uncertainties, see Forward-looking Statements on page 82 of this Form 10-Q and Part I, Item 1A, Risk Factors, on pages 8-21 ofJPMorgan Chase's 2016 Annual Report.

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm had $2.6 trillion in assets and $258.5 billion in stockholders' equity as of June 30, 2017. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities pic, a subsidiary of JPMorgan Chase Bank, N.A.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale business segments are Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset & Wealth Management ("AWM"). For a description of the Firm's business segments, and the products and services they provide to their respective client bases, refer to Note 33 ofJPMorgan Chase's 2016 Annual Report.

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EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and does not contain all of the information that is important to readers of this Form 1 O-Q. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm and its various lines of business, this Form 10-Q should be read in its entirety.

Financial performance of JPMorgan Chase

f(iinaudited) .' y) As of or forthe'peribd ended.'.;...'/' <(ih.millio'ns. except'per share data and ratios).

Selected income statement data

Total net revenue Total noninterest expense Pre-provision profit Provision for credit losses Net income

Diluted earnings per share Selected ratios and metrics

Return on common equity Return on tangible common equity Book value per share Tangible book value per share Capital ratios'* CETl

Tier 1 capital Total capital

25,470 14,506 10,964 1,215 7,029 1.82

12% 14 66.05 53.29

12.6%

14.4

16.0

24,380 13,638 10.742 1.402 6,200 1.55

10%

13 62.67 50.21

12.0%

13.6

15.2

4%

6

2

(13) 13 17

50,145 29,525 20,620 2,530 13,477 3.47

11% 14 66.05 53.29

12.6%

14.4

16.0

47.619 27,475 20.144 3.226 11.720 2.89

10%

12 62.67 50.21

12.0%

13.6

15.2

5%

7

2

(22) 15 20

(a) Ratios presented are calculated under the Basel III Transitional capital rules and represent the Collins Floor. See Capital Risk Management on pages 42' additional information on Basel III.

Comparisons noted in the sections below are calculated for the second quarter of 2017 versus the prior-year second quarter, unless otherwise specified.

Firmwide overview

JPMorgan Chase reported strong results in the second quarter of 2017 with record net income of $7.0 billion, or $1.82 per share, on net revenue of $25.5 billion. The Firm reported ROE of 12% and ROTCE of 14%.

- Net income increased 13%, reflecting higher net revenue, lower income tax expense, and lower provision for credit losses, largely offset by higher noninterest expense.
- Total net revenue increased 4%. Net interest income was $12.2 billion, up 8%, primarily driven by the net impact of higher interest rates and loan growth, partially offset by declines in Markets net interest income. Noninterest revenue was $13.3 billion, up 2%, driven by a legal benefit in Corporate related to a settlement with the Federal Deposit Insurance Corporation ("FDIC") receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts, higher Banking revenue in the CIB, higher auto lease income, and higher revenue in AWM. These increases were predominantly offset by higher Card new account origination costs, lower Mortgage Banking revenue and lower Markets revenue in the CIB.
- Noninterest expense was $14.5 billion, up 6%, reflecting the absence of a legal benefit recorded in the prior-year quarter, as well as higher auto lease depreciation and FDIC-related expenses.

- The provision for credit losses was $1.2 billion, a decrease from $1.4 billion. This quarter included a net reduction in the allowance for credit losses in the wholesale portfolio of $241 million driven by Oil & Gas, Natural Gas Pipelines and Metals & Mining, offset by a net addition to the allowance for credit losses in the consumer portfolio of $252 million driven by Card.
- The total allowance for credit losses was $14.5 billion at June 30, 2017, and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1.28%, compared with 1.40%. The Firm's nonperforming assets totaled $6.4 billion at June 30, 2017, a decrease from $7.8 billion.
- Firmwide average core loans increased 8%. Selected capital-related metrics
- The Firm added to its capital, ending the second quarter of 2017 with a TBVPS of $53.29, up 6%.
- The Firm's Basel III Fully Phased-ln CETl capital was $187 billion, and the Standardized and Advanced CETl ratios were 12.5% and 12.7%, respectively.
- The Fully Phased-ln supplementary leverage ratio ("SLR") was 6.6% for the Firm and 6.7% for JPMorgan Chase Bank, N.A. at June 30, 2017.

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ROTCE and TBVPS are considered non-GAAP financial measures. Core loans and each of the Fully Phased-ln capital and leverage measures are considered key performance measures. For a further discussion of each of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 15-17, and Capital Risk Management on pages 42-48.

Lines of business highlights

Selected business metrics for each of the Firm's four lines of business are presented below for the second quarter of 2017.

CCB ROE 17%

Average core loans up 9%; average deposits of $640 billion, up 10%

28.4 million active mobile customers, up 14%

Credit card sales volume up 15% and merchant processing volume up 12%

Maintained #1 ranking for Global Investment Banking fees with 8.3% wallet share YTD

ROE 15%

Banking revenue up 17%; Markets revenue down 14%

CB .

ROE T7% '

Record revenue and net income of $2.1 billion (up 15%), and $902 million (up 30%), respectively

Average loan balances of $198 billion, up 12%

AWM ROE 27%

Record net income of $624 million, up 20%; revenue of $3.2 billion, up 9%

Average loan balances of $122 billion, up 9%

Assets under management ("AUM") of $1.9 trillion, up 11%; 77% of mutual fund AUM ranked in the 1st or 2ni1 quartile over 5 years

For a detailed discussion of results by line of business, refer to the Business Segment Results on pages 18-40.

Credit provided and capital raised JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided credit and raised capital of $1.2 trillion for wholesale and consumer clients during the first six months of 2017:

- $131 billion of credit for consumers
- $11 billion of credit for U.S. small'businesses
- $413 billion of credit for corporations
- $605 billion of capital raised for corporate clients and non-U.S. government entities
- $38 billion of credit and capital raised for U.S. government and nonprofit entities, including states, municipalities, hospitals and universities

2017 outlook

These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations ofJPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 82 of this Form 10-Q and Risk Factors on *pages 8-21 ofJPMorgan Chase's 2016 Annual Report. There is no assurance that actual results for the full year of 2017 will be in line with the outlook set forth below, and the Firm does not undertake to update any of these forward-looking statements to reflect the impact of circumstances or events that arise after the date hereof.*

JPMorgan Chase's outlook for the remainder of 2017 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these interrelated factors will affect the performance of the Firm and its lines of business. The Firm expects it will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the legal and regulatory, as well as business and economic, environment in which it operates.

Firmwide

- Management expects 2017 net interest income to increase by approximately $4 billion compared with the prior year, depending on market conditions.
- The Firm continues to take a disciplined approach to managing its expenses, while investing in growth and innovation. As a result, Firmwide adjusted expense in 2017 is expected to be approximately $58 billion (excluding Firmwide legal expense).
- The Firm continues to experience charge-off rates at or near historically low levels, reflecting favorable credit conditions across the consumer and wholesale portfolios. Management expects total net charge-offs of approximately $5 billion in 2017, excluding net charge-offs of $467 million related to the write-down of the student loan portfolio in the first quarter of 2017.
- Management expects average core loan growth of approximately 8% in 2017.

CCB

- In Card, management expects the portfolio average net charge-off rate to increase in 2017, but remain below 3% for the year, reflecting continued loan growth and the seasoning of newer vintages, with quarterly net charge-off rates reflecting normal seasonal trends.

CIB

- Management expects investment Banking fees in the second half of 2017 to be lower compared to a strong prior-year period.

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CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion ofJPMorgan Chase's Consolidated Results of Operations on a reported basis for the three and six months ended June 30, 2017 and 2016, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, seepages 77-79 of this Form 10-Q and pages 132-134 ofJPMorgan Chase's 2016 Annual Report.

Revenue

Three months ended Jime.30,-
(in millions)

Investment banking fees

Principal transactions

Lending- and deposit-related fees

Asset management, administration and commissions

Securities gains/dosses)

Mortgage fees and related income

Card income

Other income[1"1]

Noninterest revenue

Net interest income

Total net revenue

2017

1.644 2.976 1,403 3,681 21 689 1,358 1.261

10% 5 6 4 NM (41) (14) 17 2

■ 2016./;. Change.,;

13.033 11,347

$ 1,810 3,137 1,482 3,824 (34) 404 1,167 1,472

13,262 12,208

$ 25,470 $ 24.380

(a) Included operating lease income of $873 million and $651 million for the three months ended June 30, 2017 and 2016, respectively and $1.7 billion and $1.3 billion for the six months ended June 30, 2017 and 2016, respectively.

Quarterly results

Investment banking fees increased, with strong performance across products. Higher equity underwriting fees were driven by growth in industry-wide issuance, including a strong IPO market; higher debt underwriting fees were driven by a higher share of fees; and higher advisory fees were driven by a higher level of completed transactions. For additional information, see CIB segment results on pages 25 -30 and Note 5.

Principal transactions revenue increased reflecting higher gains on private equity investments held in Corporate, and the absence of fair value losses recorded in the prior year on the investment in Square, Inc. in CCB, partially offset by lower Markets revenue in CIB. For additional information, see CIB, Corporate and CCB segment results on pages 25-30 , page 39 and pages 20-24 , respectively, and Note 5.

Mortgage fees and related income decreased driven by lower mortgage servicing right ("MSR") risk management results and lower net production revenue on lower margins. For further information on mortgage fees and related income, see CCB segment results on pages 20-24 and Note 14.

Card income decreased predominantly driven by higher credit card new account origination costs, partially offset by higher other card-related fees, largely annual fees. For further information, see CCB segment results on pages 20-24.

Other income increased primarily reflecting the following:

- a legal benefit of $645 million in Corporate related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts
- higher operating lease income reflecting growth in auto operating lease volume in CCB;

the increases were partially offset by

- the absence of a gain in the prior year on the sale of Visa Europe interests in CCB, and
- lower other income in CIB.

For further information on other income, see Note 5.

Net interest income increased primarily driven by the net impact of higher rates and loan growth across the businesses, partially offset by the declines in Markets net interest income in CIB driven by a shift in asset mix in Currencies & Emerging Markets and Equity Markets, and an adjustment for capitalized interest on modified loans in Mortgage Banking. The Firm's average interest-earning assets were $2.2 trillion, and the net interest yield on these assets, on a fully taxable-equivalent ("FTE") basis, was 2.31%, an increase of 6 basis points from the prior year.

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For additional information on asset management, administration and commissions income, see the segment discussions of CIB and AWM on pages 25-30 and pages 35-38, respectively, and Note 5; on lending- and deposit-related fees, see the segment results for CCB on pages 20-24, CIB on pages 25-30, and CB on pages 31-34 and Note 5; and on securities gains, see the Corporate segment discussion on page 39.

Year-to-date results

Investment banking fees increased reflecting higher debt and equity underwriting fees. The higher debt underwriting fees were driven by a higher share of fees and an overall increase in industry-wide fee levels; and the higher equity underwriting fees were driven by growth in industry-wide issuance, including a stronger IPO market.

Principal transactions revenue increased primarily as a result of higher client-driven market-making revenue in CIB, reflecting:

- Higher Fixed Income-related revenue primarily from Securitized Products driven by strong demand in the first quarter
- Higher Equity-related revenue primarily from corporate derivatives and Prime Services, partially offset by lower revenue in other derivatives related to market-making activities, and
- Higher Lending-related revenue reflecting lower fair value losses on hedges of accrual loans and higher gains on securities received from restructurings.

Asset management, administration and commissions revenue increased in AWM and CCB reflecting higher market levels.

Mortgage fees and related income decreased driven by lower MSR risk management results, lower net production revenue on lower margins, and lower servicing revenue due to lower average third-party loans serviced.

Card income decreased predominantly driven by higher credit card new account origination costs, partially offset by higher other card-related fees, largely annual fees. For further information, see CCB segment results on pages 20-24.

Other income increased primarily reflecting the following:

- a legal benefit of $645 million in Corporate related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts
- higher operating lease income reflecting growth in auto operating lease volume in CCB;

the increases were partially offset by

- the absence of gains in the prior year on the sale of Visa Europe interests in CCB, as well as on the disposal of assets in AWM, and
- lower other income in CIB.

Net interest income increased primarily driven by the net impact of higher rates and loan growth across the businesses, partially offset by the declines in Markets net interest income in CIB driven by a shift in asset mix in Currencies & Emerging Markets and Equity Markets. The Firm's average interest-earning assets were $2.2 trillion, and the net interest yield on these assets, on a FTE basis, was 2.32%, an increase of 4 basis points from the prior year.

Provision for credit losses

"'■ Three 'month's ended June. 30/
: (in! millions) ■

Consumer, excluding credit card Credit card
Total consumer
Wholesale
Total provision for credit losses
.2017
454 2,380
316 1.940
44 % 23 % 26 % NM
(22)%
2016 , ', .Change ;
2,256
2,834
970
(87)% $ 25 16 NM
(304)
(13)% $ 2,530 $ 3,226

8

Quarterly results

The provision for credit losses decreased as a result of:

- a decline in the wholesale provision predominantly due to a $241 million reduction in the allowance for credit losses compared with an addition in the prior year; actions for both periods related to Oil & Gas, Natural Gas Pipelines and Metals & Mining

the decline was partially offset by

- an increase in the consumer provision primarily driven by $120 million of higher net charge-offs, predominantly in the credit card portfolio, and a $74 million higher addition to the allowance for credit losses, which included current quarter additions in the credit card, business banking and auto portfolios, partially offset by a reduction in the residential real estate portfolio.

For a more detailed discussion of the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 20-24, CIB on pages 25-30, CB on pages 31-34, the Allowance for Credit Losses on pages 63-65 and Note 12.

Year-to-date results

The provision for credit losses decreased as a result of:

- a decline in the wholesale provision predominantly due to a $334 million reduction in the allowance for credit losses compared with an addition in the prior year; actions for both periods related to Oil & Gas, Natural Gas Pipelines and Metals & Mining

the decline was partially offset by

- an increase in the consumer provision primarily driven by $284 million of higher net charge-offs, predominantly in the credit card portfolio, $218 million related to the transfer of the student loan portfolio to held-for-sale, and a $76 million higher addition to the allowance for credit losses, which included current year additions in the credit card, business banking and auto portfolios, partially offset by a reduction in the residential real estate portfolio.

For a more detailed discussion of the student loan sale, see CCB segment results on pages 20-24.

Noninterest expense

i(ihimilli6hs):·-'

Compensation expense Noncompensation expense: Occupancy

Technology, communications and equipment Professional and outside services Marketing Other expense[13"6']

Total noncompensation expense

Total noninterest expense

Thfeemdhths-endedJiirie 30i-;J$:/ J2017 ' \ „ 201.6 ..'Change

899 1,665 1,700 672 924

1,782 3.283 3.248 1,375 2,349

1,873 3,698 3,187 1,469 3,391

1

12 (3) 13 75 16 6 °/

(1)% $ 15,907 $ 15,438

912 1,870 1,644

12,037

5,860

13,618

756 1,618

$ 29,525 S 27,475

6,800

$ 14,506 $ 13,638

a) included Firmwide legal expense of $61 million and $(430) million for the three months ended June 30, 2017 and 2016. respectively and $279 million and $(476) million for the six months ended June 30, 2017 and 2016, respectively.

b) Included FDIC-related expense of $376 million and $283 million for the three months ended June 30. 2017 and 2016, respectively and $757 million and $552 million for the six months ended June 30. 2017 and 2016. respectively.

Quarterly results

Compensation expense decreased predominantly driven by lower performance-based compensation expense in CIB, partially offset by investments in headcount, including bankers and support staff in certain businesses.

Noncompensation expense increased as a result of:

- the absence of a legal benefit recorded in the prior year in Corporate
- higher depreciation expense from growth in auto operating lease volume in CCB
- higher FDIC-related expense
- higher marketing expense in CCB, and
- contributions to the Firm's Foundation.

For a further discussion of legal expense, see Note 21.

Year-to-date results

Compensation expense increased predominantly driven by investments in headcount, including bankers and support staff in certain businesses, as well as higher performance-based compensation expense particularly in AWM.

Noncompensation expense increased as a result of:

- higher legal expense driven by the combined impact of an increase in legal expense in AWM and a lower legal benefit in Corporate
- higher depreciation expense from growth in auto operating leased assets in CCB
- higher FDIC-related expense
- contributions to the Firm's Foundation, and
- higher marketing expense in CCB.

Income tax expense

, ..V • 'Three months ended June 30;."; . v. \-V Six months ended J.une-30. j '■ '{ ./k li^jMl.-..j°l^.:.-,^^h

3nge;^ '^2017': /^2016^. « ^ .Change 1

$ 9,749 $ 9.340 4% $ 18,090 $ 16,918 7%

2,720 3,140 (13) 4,613 5,198 (11)

27.9% 33.6% 25.5% 30.7%

^(irMlibrisVf / '■Z Income before income tax expense Income tax expense Effective tax rate

Quarterly results The effective tax rate decreased predominantly due to the release of a valuation allowance and the write-off of certain deferred tax liabilities, as well as due to the change in the mix of income and expenses subject to U.S. federal and state and local taxes.

Year-to-date results

The effective tax rate decreased predominantly due to larger tax benefits resulting from the vesting of employee-based stock awards and the release of a valuation allowance. The tax benefits resulting from employee-based stock awards were related to the appreciation of the Firm's stock price upon vesting of these awards above their original grant price.

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CONSOLIDATED BALANCE SHEETS ANALYSIS

Consolidated balance sheets overview

The following is a discussion of the significant changes between June 30, 2017, and December 31, 2016.

Selected Consolidated balance sheets data

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Assets

Cash and due from banks Deposits with banks

Federal funds sold and securities purchased under resale agreements Securities borrowed Trading assets:

Debt and equity instruments

Derivative receivables Securities Loans

Allowance for loan losses

Loans, net of allowance for loan losses

Accrued interest and accounts receivable

Premises and equipment

Goodwill

Mortgage servicing rights Other intangible assets other assets

Total assets

-•'Juri'30,. V :' 2017 i....

21,781 427,380 218,570

90,654

350,558 56,506 263,458 908,767 (13,363)

895,404 64,038 14,206 47,300 5,753 827 106,739

$ 2,563,174 $ 2,490.972

(9)% 17 (5) (6)

14 (12) (9) 2

(3)

2 22

1

(6) (4) (5) 3 %

Cash and due from banks and deposits with banks The net increase was primarily driven by deposit growth and a shift in the deployment of excess cash from securities and securities purchased under resale agreements. The Firm's excess cash is placed with various central banks, predominantly Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements decreased primarily due to the shift in the deployment of excess cash to deposits with banks.

For additional information on the Firm's Liquidity Risk Management, see pages 67-71.

Trading assets and trading liabilities-debt and equity instruments increased predominantly related to client-driven market-making activities in CIB.

- The increase in trading assets was driven by higher debt and equity instruments in Prime Services reflecting client demand and in Rates reflecting higher levels when compared to lower levels at year-end.
- The increase in trading liabilities was driven by higher levels of client-driven short positions in debt instruments, partially offset by reductions in equity instruments.

For additional information, refer to Note 2.

Trading assets and trading liabilities-derivative receivables and payables decreased predominantly related to client-driven market-making activities in CIB Markets, reflecting lower foreign exchange and interest rate derivative receivables and payables, driven by maturities and market movements.
For additional information, refer to Derivative contracts on pages 61-62, and Notes 2 and 4.

Securities decreased primarily due to sales of U.S. Treasuries and non-U.S. government securities.

Loans increased reflecting the following:

- higher wholesale loans predominantly driven by originations in CB and higher loans to Private Banking clients in AWM, partially offset by
- lower consumer loans as a result of the student loan portfolio sale, lower home equity loans, and the seasonal decline in credit card balances, predominantly offset by higher retention of originated high-quality prime mortgages in CCB and AWM.

The allowance for loan losses decreased reflecting the following:

- a net reduction in the wholesale allowance primarily driven by Oil & Gas, Natural Gas Pipelines and Metals & Mining
- the consumer allowance remained relatively flat, with the utilization of the allowance in connection with the transfer of the student loan portfolio to held-for-sale, and a reduction in the residential real estate portfolio driven by continued improvement in home prices and delinquencies, predominantly offset by additions to the credit card, business banking and auto portfolios, driven by loan growth as well as higher loss rates in credit card.

For detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 49-65, and Notes 2, 3,11 and 12.

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Accrued interest and accounts receivable increased reflecting higher client receivables related to client-driven market-making activities in CIB.

Selected Consolidated balance sheets data (continued)
For information on Securities, see Notes 2 and 9; and MSRs, see Note 14.

Liabilities
Deposits
Federal funds purchased and securities loaned or sold under repurchase agreements Commercial paper Other borrowed funds Trading liabilities:
Debt and equity instruments
Derivative payables Accounts payable and other liabilities
Beneficial interests issued by consolidated variable interest entities ("VIEs")
Long-term debt
Total liabilities
Stockholders' equity
Total liabilities and stockholders' equity

:?•?■'■ T*-- ʳ juri3'o,' '* 'Dicl'ti '" ' :^;-.ʳ.Vʳ;""-iJ

$ 1,439,473	$ 1,375,179	5%
165,621	165.666	
22,207	11,738	89
30,936	22,705	36
91,628	87,428	5
41,795	49,231	(15)
189,160	190,543	(1)
30,898	39.047	(21)
292,973	295,245	(1)
2,304,691	2,236.782	3

	258,483	254,190	2
	$ 2,563,174	$ 2,490,972	3%

Deposits increased due to the following:

- higher wholesale deposits driven by growth in client activity in CIB's Securities Services and Treasury Services businesses, partially offset by lower balances in AWM reflecting balance migration into the Firm's investment-related products, and the impact of seasonality in both CB and AWM.
- higher consumer deposits reflecting the continuation of strong growth from existing and new customers, and low attrition rates

For more information on deposits, refer to the Liquidity Risk Management discussion on pages 67-71; and Notes 2 and 15.

Federal funds purchased and securities loaned or sold under repurchase agreements were flat reflecting a change in the mix of funding to commercial paper and other borrowed funds offset by on-going client activity in CIB.

Commercial paper increased due to higher issuance in the wholesale market, reflecting a change in the mix of funding from securities sold under repurchase agreements for CIB Markets activities. For additional information, see Liquidity Risk Management on pages 67-71.

Other borrowed funds increased driven by a change in the mix of funding from securities sold under repurchase agreements in CIB.

Beneficial interests issued by consolidated VIEs decreased due to net maturities of credit card securitizations and the deconsolidation of the student loan securitization entities. For further information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements on page 14 and Note 19; and for a more detailed discussion of the student loan sale, see CCB segment results on pages 20-24 and Note 23.

For information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 67-71; on changes in stockholders' equity, see page 86, and on the Firm's capital actions, see Capital actions on page 47.

CONSOLIDATED CASH FLOWS ANALYSIS

Consolidated cash flows overview

The following is a discussion of cash flow activities during the six months ended June 30, 2017 and 2016.

?(in millions) -;. ; '■ •*■: .y'v	•, 2017	\ ?01;6j
Net cash provided by/(used in)		
Operating activities	$ (13,024)	$ (22,907)
Investing activities	(37,079)	(52,064)
Financing activities	47,911	74,159
Effect of exchange rate changes on cash	100	32
Net decrease in cash and due from banks	$ (2,092)	$ (780)

Operating activities

Cash used in operating activities for the period ending June 30, 2017 resulted from:

Client-driven market-making activities in CIB

- an increase in trading assets was primarily driven by higher debt and equity instruments in Prime Services reflecting client demand and in Rates reflecting higher levels when compared to lower levels at year-end

- an increase in accrued interest and accounts receivable due to higher client receivables

Other operating activity

- higher net originations and purchases of loans held-for-sale predominantly in CIB and CB.

Cash used in operating activities for the period ending June 30, 2016 resulted from:

Client-driven market-making activities in CIB

- an increase in accrued interest and accounts receivable driven by higher client receivables
- an increase in trading assets, which was predominantly offset by an increase in trading liabilities.

Investing activities

Cash used in investing activities during 2017 resulted from:

- an increase in deposits with banks, which were placed with various central banks, predominantly Federal Reserve Banks
- higher wholesale loans predominantly driven by originations in CB and higher loans to Private Banking clients in AWM, partially offset by lower consumer loans as a result of the student loan portfolio sale, lower home equity loans, and the seasonal decline in credit card balances, predominantly offset by higher retention of originated high-quality prime mortgages in CCB and AWM

Partially offsetting these cash outflows was a decrease in securities and securities purchased under resale agreements due to the shift in the deployment of excess cash to deposits with banks.

Cash used in investing activities during 2016 resulted from:

- an increase in wholesale loans driven by strong originations of commercial and industrial loans and commercial real estate loans
- an increase in consumer loans reflecting the retention of originated high-quality prime mortgages and growth in auto loans
- a net increase in securities purchased under resale agreements due to a higher demand for securities to cover short positions related to client-driven market-making activities in CIB and the deployment of excess cash by Treasury and Chief Investment Office ("CIO").

For both periods, partially offsetting these cash outflows were net proceeds from paydowns, maturities, sales and purchases of investment securities.

Financing activities

Cash provided by financing activities in 2017 resulted from:

- higher wholesale deposits reflecting growth in client activity, partially offset by seasonal factors
- higher consumer deposits reflecting the continuation of strong growth from existing and new customers, and low attrition rates
- an increase in commercial paper due to higher issuance in the wholesale market, reflecting a change in the mix of funding from securities sold under repurchase agreements for CIB Markets activities
- an increase in other borrowed funds driven by a change in the mix of funding from securities sold under repurchase agreements in CIB

Partially offsetting these inflows were net payments of long-term borrowings.

Cash provided by financing activities in 2016 resulted from:

- an increase in consumer deposits reflecting the continued growth from new and existing customers, as well as the impact of low attrition rates
- higher wholesale deposits reflecting growth in client activity in Treasury Services
- an increase in securities loaned or sold under repurchase agreements due to higher secured financing of investment securities in Treasury and CIO, and higher client-driven market-making activities in CIB
- net proceeds from long-term borrowings.

For both periods, cash was used for repurchases of common stock and dividends on common and preferred stock.

For a further discussion of the activities affecting the Firm's cash flows, see Consolidated Balance Sheets Analysis on pages 11-12, Capital Risk Management on pages 42-48, and Liquidity Risk Management on pages 67-71 of this Form 10-0, and pages 110-115 ofJPMorgan Chase's 2016 Annual Report.

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OFF-BALANCE SHEET ARRANGEMENTS

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under accounting principles generally accepted in the

U.S. ("U.S. GAAP"). The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees). For further discussion, see Note 19 of this Form 10-Q and Off-Balance Sheet Arrangements and Contractual Cash Obligations on pages 45-46 and Note 29 of JPMorgan Chase's 2016 Annual Report.

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees. For further information on the types of SPEs, see Note 13 of this Form 10-Q, and Note 1 and Note 16 ofJPMorgan Chase's 2016 Annual Report.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-l", "A-l" and "Fl" for Moody's Investors Service ("Moody's"), Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by Firm-administered consolidated SPEs. In the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding held by third parties as of June 30, 2017, and December 31, 2016, was $2.9 billion and $2.7 billion, respectively. The aggregate amounts of commercial paper issued by these SPEs could increase in future periods should clients of the Firm-administered consolidated SPEs draw down on certain unfunded lending-related.commitments. These unfunded lending-related commitments were $8.2 billion and $7.4 billion at June 30, 2017, and December 31, 2016, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multiseller conduits in Note 13.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer and any credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 13 for additional information.

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn upon or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 61 and Note 19. For a discussion of liabilities associated with loan sales and securitization-related indemnifications, see Note 19.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES AND KEY PERFORMANCE MEASURES

Non-GAAP financial measures

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 83-87. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year-to-year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are considered non-GAAP financial measures. The Firm also reviews the results of the lines of business on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the Firm and business-segment level, because these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Firm or of the particular business segment, as the case may be, and, therefore, facilitate a comparison of the Firm or the business segment with the performance of its relevant competitors. For additional information on these non-GAAP measures, see Business Segment Results on pages 18-40.

Additionally, certain credit metrics and ratios disclosed by the Firm exclude PCI loans, and are therefore non-GAAP measures. For additional information on these non-GAAP measures, see Credit Risk Management on pages 49-65.

Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

/ ;'■".• Three-months ended Jurie.3b;,

.2016.

Other income
Total noninterest revenue
Net interest income
Total net revenue
Pre-provision profit Income before income tax expense Income tax expense Overhead ratio

' Fully taxable- ■' '.' ■ ' J - •".'. ■ "Fully, taxabie^.

529 529 305
596 596 339
2,068 13,858 12,547
1,261 13,033 11,347

Reported, - equivalent Managed ' Reported-- ^ -'. equivalent ..-/- results ; /•adjustmehts!ªJ-; ., i'tasts^..[,-; j; C ..'resfflfiL; •• ^;.;adjustmente·^j;

25,470 10,964 9,749 2,720 57%

834 834 834 834 NM
935 935 935 935 NM

24.380 10,742 9,340 3,140 56%

1,472 13,262 12,208

26,405 11,899 10,684 $ 3,655 55°/

^Managed:"! '-;• basis.**,**
1,790 13,562 11.652

25,214 11,576 10,174 3,974 54%

' Six months' ended June'30; '

2016"

.(in millions, except ratios)
Other income
Total noninterest revenue
Net interest income
Total net revenue
Pre-provision profit Income before income tax expense Income tax expense Overhead ratio

Reported' ·'results
2,242 25,873 24,272

50,145 20,620 18,090 4,613 59%

• Fully taxable-equivalent • .adjustments?'[1]

1,178 1,178 668

1,846 1,846 1,846 1,846 NM

Managed .. .basis ..',,•
$ 3,420 $ 27,051 24,940
51,991 22,466 19,936 $ 6,459 $ 57%

Reported' results

2,062 24,892 22,727

47,619 20.144 16,918 5.198 58%

Fully taxable-. , equivalent adjustments·il,

1,080 1,080 598

1,678 1,678 1,678 $ 1,678 NM

Managed .! ' ;basis . "A

3,142 25.972 23,325

49,297 21,822 18,596 6,876 56%

(a) Predominantly recognized in CIB and CB business segments and Corporate.

15

Net interest income excluding CIB's Markets businesses

In addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding net interest income arising from CIB's Markets businesses to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. This net interest income is referred to as non-markets related net interest income. CIB's Markets businesses represent both Fixed Income Markets and Equity Markets. Management believes that disclosure of non-markets related net interest income

provides investors and analysts with another measure by which to analyze the non-markets-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on lending, investing and deposit-raising activities.

The data presented below are non-GAAP financial measures due to the exclusion of markets related net interest income arising from CIB.

Three monthsehdedjuneab;

(in Mljbi^":eKe|tt_rates).

Net interest income - managed basis'31"11 Less: CIB Markets net interest income'1'

Net interest income excluding CIB Markets'*

Average interest-earning assets

Less: Average CIB Markets interest-earning assets'1

Average interest-earning assets excluding CIB Markets

Net interest yield on average interest-earning assets - managed basis

Net interest yield on average CIB Markets interest-earning assets1'1

Net interest yield on average interest-earning assets excluding CIB Markets

.2017

11,652 1,579

8% (32) 14

5 3

5%

,2016. ../Change '

$ 12,547 $ 1,075

$ 11,472 $ 10,073

$2,177,109 $2,079,525 537,263 522.321

2.31% 0.80

$1,639,846 $1,557,204

2.81%

2.25% 1.22

2.60%

.2017

23.325 3.078

7% (21) 11

5 2

'^zoia^^c^nge^

24,940 2,439

$ 22,501 $ 20.247

$2,169,055 $2,061,754

530,051 519.054

2.28% 1.19

$1,639,004 **$ 1,542,700**

2.64%

2.32% 0.93

2.77%

a) interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 15.
c) The prior period amounts were revised to align with CIB's Markets businesses. For further information on CIB's Markets businesses, see page 29.

16

Tangible common equity, ROTCE and TBVPS

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's net income

applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

Period end .

2017

2016

2017

2016;

i (in millions; exceptper share arid.ratid data).

Common Stockholders'equity	$ 232,415	$ 228,122	$ 230,200	$ 224,429	$ 228,959	$ 222.995
Less: Goodwill	47,300	47,288	47,290	47.309	47,292	47,320
Less: Certain identifiable intangible assets	827	862	838	928	845	957
Add: Deferred tax liabilities[11]'	3,252	3.230	3,239	3,213	3,234	3,195

187,540 $ 183.202 $ 185,311 $

Return on tangible common equity Tangible book value per share

NA

53.29 $

NA 51.44

14% NA

13% NA

14% NA

12% NA

(a) Represents deterred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Key performance measures

The Firm considers the following to be key regulatory capital measures:

- Capital, risk-weighted assets ("RWA"), and capital and leverage ratios presented under Basel III Standardized and Advanced Fully Phased-In rules and
- SLR calculated under Basel III Advanced Fully Phased-In rules. -

The Firm, as well as banking regulators, investors and analysts use these measures to assess the Firm's regulatory capital position and to compare the Firm's regulatory capital to that of other financial services companies.

For additional information on these measures, see Capital Risk Management on pages 42-48.

Core loans are also considered a key performance measure. Core loans represent loans considered central to the Firm's ongoing businesses; and exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit. Core loans is a measure utilized by the Firm and its investors and analysts in assessing actual growth in the loan portfolio.

17

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. There are four major reportable business segments - Consumer & Community

Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures and Key Performance Measures on pages 15-17.

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. For further information about line of business capital, see Line of business equity on page 46.

The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Business segment capital allocation changes The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fuily Phased-ln RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the business segments was updated. Under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business. In addition, the new methodology incorporates Basel III Standardized Fully Phased-ln RWA (as well as Basel III Advanced Fully Phased-ln RWA), leverage, the global systemically important banks ("GSIB") surcharge, and a simulation of capital in a severe stress environment. The methodology will continue to be weighted towards Basel III Advanced Fully Phased-ln RWA because the Firm believes it to be the best proxy for economic risk.

For a further discussion of those methodologies, see Business Segment Results - Description of business segment reporting methodology on pages 51-52 of JPMorgan Chase's 2016 Annual Report.

The following discussions of the business segment results are based on a comparison of the three and six months ended June 30, 2017 versus the corresponding period in the prior year, unless otherwise specified.

Segment results - managed basis

The following tables summarize the business segment results for the periods indicated.

■Thretmontris ended June 30,.v
;(ift:millions) " .
Consumer & Community Banking
Corporate & Investment Bank
Commercial Banking
Asset & Wealth Management
Corporate
Total
-2017.

^2016 , '^Change
-% $ 6,500 $ 6.004 8%
(3) 4,841 5.078 (5)
15 790 731 8
9 2,192 2.098 4
NM 183 (273) NM
5% $ 14.506 $ 13.638 6%
=2017.

5,447 4.087 1,086 841 115

(10)%
(1)
20
21 440 3%

^2b'i6;.CY;.&ange!
4,912 $ 4,048 1,298 1,020 621
$ 11,899 $ U.576

■Threemohths ended: June 30;', I(in.miilioris, except ratios)'
Consumer & Community Banking
Corporate & Investment Bank
Commercial Banking
Asset & Wealth Management
Corporate
Total
2016
.2017

16 NM (420) NM

ProvisionFor credit losses-
Change.

235 (25) (8)

1,394 $ 1.201

(53) (130) 4

(1) 100%
(13)% $
.2017
(16)%
9 30 20 NM 13%
Net ihconie/Ooss);
. 2016 , Change-.
2,710 902 624 570
2,223 $ 2.656
2.493 696 521 (166)
7,029 $ 6.200
Return on equity
2017
17% 15 17 27 NM 12%

i201i6;j
20% 15 16 22 NM 10%

i Six month's ended'Juni 30, Uihimillions).. / i."/..' .
Consumer & Community Banking
Corporate & Investment Bank
Commercial Banking

Asset & Wealth Management

Corporate

Total

Tdtalindninterestexpehse-.:

2017

-. Total net revenue.

22.568 17,300 3,620 5,911 (102)

."2016. . Change

(1)% $ 12,895 $ 12,092 7%

7 9,962 9,886 1

13 1,615 1,444 12

7 4,772 4.173 14

NM 281 (120) NM

5% $ 29,525 $ 27,475 7%

10,476 7.414 2,176 1,738 18

(9)%

14

14 (12) NM 3%

,'pre^provi5iori.prorit/(loss); -.1 2017. -,2016 r- /chahgel

9,487 $ 8,463 2,491 1,527 498

$ 22,466 $ 21,822

';Six months ended June ia "	. .';_... Provision (or credit.losses ■			.-. J"*'! Netihcotne/floss) ■			v" ?*■ y.-„. • Return cwequity ' ,'...../7j	
;(in.'millions,,except ratios) ^..j' >;.':2017, ■'.-._.	■20161.,;:.	Change	. ,':2017. ,	2016	£ Change!]/'w. ^			
Consumers Community Banking	$ 2,824 $	2.251	25%	$ 4,211 $	5,146	(18)%	16% 19%	
Corporate & Investment Bank	(149)	694	NM	5,951	4.472	33	16 13	
Commercial Banking	(167)	279	NM	1,701	1.192	43	16 14	
Asset & Wealth Management	22	5	340	1,009	1,108	(9)	22 24	
Corporate	-	(3)_	100	605	(198)	NM	NM NM	
Total	$ 2,530 $	3.226	(22)%	$ 13,477 $	11,720	15%	11%	10%

19

CONSUMER & COMMUNITY BANKING

For a discussion of the business profile of CCB, see pages 53-57 of JPMorgan Chase's 2016 Annual Report and Line of Business Metrics on page 173.

Selected income statement data

three months ended June 30.

^Oh.inUHo^,exa^^ios) •

Revenue

Lending- and deposit-related fees

Asset management, administration and commissions
Mortgage fees and related income
Card income
All other income
Noninterest revenue
Net interest income
Total net revenue

Provision for credit losses

Noninterest expense
Compensation expense Noncompensation expense™
Total noninterest expense
Income before income tax expense
Income tax expense
Net income

Revenue by line of business
Consumer & Business Banking
Mortgage Banking
Card, Commerce Solutions & Auto
2017 ;
1,662 1,101 807 1,878 1,553
780 535 689 1,253 881
9% 5

(42) (15) (8) (11) 6

16
. 2016, _. Change/ ; 2017
3,684 7,728
4.138 7,313

850 562 401 1,061 810

11,412 1,394

2,511 3,989

11,451 1.201

2.420 3,584
7,001 15,381

22,382 2,824
6,500
6.004

11 8

(17) (19) (16)

13 (26) (3)

5,044 7,851
6,663 2,452
3,518 1,295
12,895

4,246 1,590

4.616 1,921 4,914
$ 2,223 $ 2,656

$ 10,139 2,955 9,288
Change!

7% 3

(40) (23) 2

(12) 5

(1) 25

7

(19) (20) (18)

11 (22) (3)

Mortgage fees and related income details:
Net production revenue
Net mortgage servicing revenue""
Mortgage fees and related income

152 249
401

261 428
689

(42) (42) (42)%

293 514
807

423 933
$ 1.356

(31) (45) (40)%

Financial ratios Return on equity Overhead ratio

17% 57

20% 52

16% 58

19% 54

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures.

a) Included operating lease depreciation expense of $638 million and $460 million for the three months ended June 30, 2017 and 2016, respectively, and $1.2 billion and $892 million for the six months ended June 30, 2017 and 2016, respectively.
b) Included MSR risk management of $(57) million and $73 million for the three months ended June 30, 2017 and 2016, respectively, and $(109)

million and $202 million for the six months ended June 30, 2017 and 2016. respectively.

Quarterly results

Net income was $2.2 billion, a decrease of 16%, driven by higher noninterest expense and provision for credit losses.

Net revenue was $11.4 billion, flat compared to prior year.

Net interest income was $7.7 billion, up 6%, driven by higher deposit balances, deposit margin expansion and higher loan balances in Card, partially offset by the impact of higher rates resulting in higher funding costs and an adjustment for capitalized interest on modified loans, both in Mortgage Banking.

Noninterest revenue was $3.7 billion, down 11%, driven by higher new account origination costs in Card, the absence of a gain on the sale of visa Europe interests in the current year, lower MSR risk management results and net production revenue reflecting lower mortgage production margins. These factors were largely offset by higher auto lease volume, higher card- and deposit-related fees and the absence of fair-value losses on the investment in Square, Inc. in the current year. See Note 14 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was $6.5 billion, an increase of 8%, driven by higher auto lease depreciation, continued business growth and investments in marketing.

The provision for credit losses was $1.4 billion, an increase of 16% from the prior year. The increase in the provision was driven by $118 million of higher net charge-offs, predominantly in the credit card portfolio, and a $75 million higher addition to the allowance for credit losses when compared to the prior year.

Current quarter results included:

- a $350 million addition to the allowance for credit losses in the credit card portfolio, due to loan growth and higher loss rates, compared to a $250 million addition in the prior year;
- a $50 million addition to the allowance for credit losses in the business banking portfolio-, and
- a $25 million addition to the allowance for credit losses in the auto portfolio, compared to a $50 million addition in the prior year;

the additions were partially offset by

- a $175 million reduction in the allowance for credit losses in the residential real estate portfolio, reflecting continued improvement in home prices and delinquencies, compared to a $100 million reduction in the prior year.

The Firm transferred the student loan portfolio to held-for-sale in the first quarter of 2017. The Firm sold substantially all of the portfolio in the second quarter of 2017, and such sale did not have a material impact on the Firm's Consolidated Financial Statements.

Year-to-date results

Net income was $4.2 billion, a decrease of 18%, driven by higher noninterest expense and provision for credit losses.

Net revenue was $22.4 billion, a decrease of 1%.

Net interest income was $15.4 billion, up 5%, driven by higher deposit balances, higher loan balances in Card arid deposit margin expansion, partially offset by the impact of higher rates resulting in higher funding costs and an adjustment for capitalized interest on modified loans, both in Mortgage Banking.

Noninterest revenue was $7.0 billion, down 12%, driven by higher new account origination costs in Card, the absence of a gain on the sale of Visa Europe interests in the current year and lower MSR risk management results, partially offset by higher auto lease volume and higher card- and deposit-related fees.

Noninterest expense was $12.9 billion, an increase of 7%, driven by higher auto lease depreciation, continued business growth and investments in marketing.

The provision for credit losses was $2.8 billion, an increase of 25% from the prior year, driven by $280 million higher net charge-offs, predominantly in the credit card portfolio, and a $75 million higher addition to the allowance for credit losses when compared to the prior year, (both drivers exclude the impact of the student loan portfolio transfer).

Current year results included:

- a $350 million addition to the allowance for credit losses in the credit card portfolio, due to loan growth and higher loss rates, compared to a $250 million addition in the prior year;
- a $50 million addition to the allowance for credit losses in the business banking portfolio; and
- a $25 million addition to the allowance for credit losses in the auto portfolio, compared to a $50 million addition in the prior year;

the additions were partially offset by

- a $175 million reduction in the allowance for credit losses in the residential real estate portfolio, reflecting continued improvement in home prices and delinquencies, compared to a $100 million reduction in the prior year.

In addition, there was an increase to the provision related to the first quarter transfer of the student loan portfolio to held-for-sale, resulting in a write-down of the portfolio to the estimated fair value at the time of transfer. This writedown was recognized predominantly as a $467 million charge-off, resulting in a $218 million increase in the provision for credit losses after utilization of the allowance for loan losses of $249 million.

21

Selected metrics

'■f/C ■'■■■■\-'.y': r.-'V-V^yvi/,, .{::'* :-'.,r. **i ' ':'* %';'v \! As of or for tlie thre^monrhs^r?^

j; / ■ • V;.;:.' •. "" ^ /' "i. V^'i^ ended June 30, .•. .' V . '• ' . ended June 30,.y ,;, _

j;(in.milfiqns..exffpj.li^ ..'changed '■' f;.\..2pi7.-\ -2';^Gharige^

Selected balance sheet data (period-end)						
Total assets	$ 529,859	$ 519,187	2%	$ 529,859	$ 519,187	2%
Loans:						
Consumer & Business Banking	25,044	23,588	6	25,044	23,588	6
Home equity	46,330	54,569	(15)	46,330	54,569	(15)
Residential mortgage	189,661	178.670	6	189,661	178.670	6
Mortgage Banking	**235,991**	**233,239**	**1**	**235,991**	**233.239**	**1**
Card	140,141	131.591	6	140,141	131.591	6
Auto	65,627	64,056	2	65,627	64.056	2
Student	75	7,614	(99)	75	7.614	(99)
Total loans	466,878	460.088	1	466,878	460.088	1
Core loans	393,639	364,007	8	393,639	364.007	8
Deposits	648,369	586,074	11	648,369	586,074	11
Equity	51,000	51,000	-	51,000	51.000	
Selected balance sheet data (average)						
Total assets	$ 528,598	$ 512,434	3	$ 530,338	$ 507.833	4
Loans:						
Consumer & Business Banking	24,725	23,223	6	24,543	22,998	7
Home equity	47,339	55.615	(15)	48,303	56.666	(15)
Residential mortgage	187,201	175,753	7	185,489	172,224	8
Mortgage Banking	234,540	231,368	1	233,792	228,890	2
Card	138,132	128.396	8	137,674	127,848	8
Auto	65,474	63.661	3	65,395	62,456	5
Student	4,642	7,757	(40)	5,772	7.896	(27)
Total loans	467,513	454,405	3	467,176	450,088	4
Core loans	387,783	356,380	9	384,419	350,042	10

Deposits	639,873583,115	10 631,441	572,699	10	
Equity	51,000 51,000	- 51,000	51.000		
Headcount	135,453	131,815 3%	135,453	131.815	3%

22

Selected metrics

;£As of of for the rJireeWoritHs
;;■;.-.•■>. ■ ended'June"30,: ﾞ •:'£•,.'
■ -f -'S VAsbf or f6r~the'sii<;mpnt^
: -'- *tended, June •30,'.' -'?£*
{(in'.mniibris

Credit data and quality statistics
Nonaccrual loans'3""1

Net charge-offs/(recoveries)[10] Consumer & Business Banking Home equity Residential mortgage

Mortgage Banking

Card

Auto

Student

Total net charge-offs/(recoveries)

Net charge-off/(recovery) rate'" Consumer & Business Banking Home equity(d) Residential mortgage(d) Mortgage Banking(d) Card Auto Student

Total net charge-off/(recovery) rate""

30+ day delinquency rate Mortgage Banking'6"" Card Auto

Student'6'

90+ day delinquency rate - Card

Allowance for loan losses Consumer & Business Banking Mortgage Banking, excluding PCI loans Mortgage Banking - PCI loans'0 Card Auto Student

Total allowance for loan losses [10]
$ 4,980

109 94 4

,^2017 , jqi6'4Change/;;;;^017, >/„/^20i6:; ■ av, rGhahge^
$ 4,124 $ 4,980
(17)% $ 4,124

56 7

(4)

53 35 3

113 54 (1)

6

(80)
NM (92)
21 4
NM
12

(17)% 4

3
1,037 48
38 860 46 29
53 2,030 129 498

(43)

98 1.690 113 66

NM (46)
20
14
$ 2,823

0.93% 0.30

0.05 2.98 0.40 NM 1.32

1.02%
1.59
0.88

0.80

$ 796 1,153 2,265 4,384 499

NM
36
0.92%
0.34
0.01
0.08
2.70
0.29
1.50
0.99

1.33% 1.40 1.16 1.43

0.70

703 1.488 2,654 3,684
449
274
$ 2.076

0.95%
0.45
0.01
0.10

2.66
0.36
1.68
1.02

1.33% 1.40 1.16 1.43
13 (23) (15)
19
11
NM
(2)%
13 (23) (15)
19
11
NM
(2)%

0.70
$ 9,097

$ 703 1,488 2,654 3,684 449 274

$ 9,252

a) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
b) At June 30, 2017 and 2016, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of $4.1 billion and $5.2 billion, respectively: and (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $24 million and $252 million, respectively. These amounts have been excluded based upon the government guarantee.
c) Net charge-offs/(recovenes) and the net charge-off/(recovery) rates for the three months ended June 30, 2017 and 2016, excluded $22 million and $41 million, respectively, and for six months ended June 30, 2017 and 2016, excluded $46 million and $88 million, respectively, of write-offs in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see summary of changes in the allowances on page 64.
d) Excludes the impact of PCI loans. For the three months ended June 30, 2017 and 2016, the net charge-off/(recovery) rates including the impact of PCI loans were as follows: (1) home equity of 0.06% and 0.25%, respectively; (2) residential mortgage of (0.01)% and 0.01%, respectively; (3) Mortgage Banking of 0.01% and 0.07%, respectively; and (4) total CCB of 0.99% and 0.91%, respectively. For the six months ended June 30, 2017 and 2016, the net charge-off/ (recovery) rates including the impact of PCI loans were as follows: (1) home equity of 0.23% and 0.33%, respectively; (2) residential mortgage of -% for both periods; (3) Mortgage Banking of 0.05% and 0.09%, respectively; and (4) total CCB of 1.23% and 0.93%. respectively.
e) At June 30. 2017 and 2016. excluded mortgage loans insured by U.S. government agencies of $6.0 billion and $7.2 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
f) Excludes PCI loans. The 30+ day delinquency rate for PCI loans was 9.06% and 10.09% at June 30, 2017 and 2016. respectively.
g) Excluded student loans insured by U.S. government agencies under FFELP of $458 million at June 30, 2016, that are 30 or more days past due. This amount has been excluded based upon the government guarantee.
h) Excluding net charge-offs of $467 million related to the student loan portfolio transfer in the first quarter of 2017, the total net charge-off rate for the six months ended June 30, 2017 would have been 1.10%.

Selected metrics

;As of prfor tfie;three months vl ,£'*;endedJiine 30)., ';£ :/i;; ;
2016
■ (in billions, except/ratiqsVand .whefe;OfJerwise'T|pted):... . , ; 2017;.'

60.7 5,217

45,876

28,386 $ 230.1

Business Metrics

CCB households (in millions)

Number of branches

Active digital customers (in thousands)[13]'

Active mobile customers (in thousands)""
Debit and credit card sales volume

625.4 1.96% 2.2 253.0

Consumer & Business Banking

Average deposits Deposit margin

Business banking origination volume Client investment assets

Mortgage Banking

9.7 14.2

11.2 13.8

Mortgage origination volume by channel Retail
23.9 $
25.0

Correspondent

Total mortgage origination volume [11]

Total loans serviced (period-end)	$ 827.8	$ 880.3
Third-party mortgage loans serviced (period-end)	568.0	629.9
MSR carrying value (period-end)	5.8	5.1
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	1.02%	0.81%
MSR revenue multiple""	2.91x	2.3 lx
Card, excluding Commercial Card		
Credit card sales volume	$ 156.8	$ 136.0
New accounts opened (in millions)	2.1	2.7
Card Services		
Net revenue rate	10.53%	12.28%
Commerce Solutions		
Merchant processing volume	$ 294.4	$ 263.8
AUtO		
Loan and lease origination volume	$ 8.3	$ 8.5
Average Auto operating lease assets	14.7	10.4

(3) 7

14 12

10 13
,2017

60.7 5,217

45,876

28,386 438.5 $

19.9 27.5

617.3 $ 1.92% 3.9 $ 253.0

47.4

18.7 27.6
46.3

827.8 568.0 5.8

1.02% 2.91X

296.5 4.6

10.34%

12 $ 568.7 $ 511.3

(2) $ 16.3 $ 18.1

41% 14.2 10.0

f-Ghajige:-^

3°/((3)

14 12

11

1 13

(6)

(2)

(6) (10) 14

15 (8)

11

(10) 42%

a) Users of all web and/or mobile platforms who have logged in within the past 90 days.
b) Users of all mobile platforms who have logged in within the past 90 days.
c) Firmwide mortgage origination volume was $26.2 billion and $28.6 billion for the three months ended June 30, 2017 and 2016, respectively, and $51.8 billion and $53.0 billion for the six months ended June 30, 2017 and 2016. respectively.
d) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (penod-end) divided by the ratio of annualized loan servicing-related revenue to third-party mortgage loans serviced (average).

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CORPORATE & INVESTMENT BANK

For a discussion of the business profile of CIB, see pages 58-62 of JPMorgan Chase's 2016 Annual Report and Line of Business Metrics on page 173.

Selected income statement data

.Three months ended Jurie30,

yinmillibnSi.exGept ratios)
Revenue
Investment banking fees
Principal transactions
Lending- and deposit-related fees
Asset management, administration and commissions
All other income
Noninterest revenue
Net interest income
Total net revenue [131]

Provision for credit losses

1,803 2,928
387 1,068
258
6,444 2,445
8,889

(53)

1.636 2.965
385 1.025
464
6,475 2,690
9,165

235

10% (1)
1
4
(44)

(9) (3)

NM

3,615 6,435
775 2,120
435
13,380 5,045
18,425

(149)

2.957 5,435
779 2.094
744
12.009 5.291
17.300

694

22% 18 (1) 1

(42) 11 (5) 7

NM

Noninterest expense

Compensation expense Noncompensation expense

Total noninterest expense Income before income tax expense

income tax expense

Net income

Financial ratios

Return on equity Overhead ratio

Compensation to revenue ratio

5,078 3,852 1,359

2,451 2,390

4,841 4,101 1,391

$ 2,710 $ 2,493

15%

54

28

(10) 2

(5) 6 2

9%

9,886 6,720 2,248

5,251 4,711

9,962 8,612 2,661

5,951 $ 4,472

16%

54

28

(2)

4

1 28 18 33%

(a) Included tax-equivalent adjustments, predominantly due to income tax credits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; and tax-exempt income from municipal bonds of $554 million and $476 million for the three months ended June 30, 2017 and 2016, respectively, and $1.1 billion and $974 million for the six months ended June 30, 2017 and 2016, respectively.

Selected income statement data

Three-month's ended.Jurie-30:

kin millions)

Revenue by business

investment Banking Treasury Services Lending

Total Banking

Fixed Income Markets Equity Markets Securities Services Credit Adjustments & Other[13']

Total Markets & Investor Services

Total net revenue

2017

1,695 $ 1,055 373

3,123

3,216 1,586 982 (18)

5,766

8,889 $

1,492 892 277
2016 J; ' \ , 4Ghange;,rV,

14%
18
35
2,661

3,959 1,600 907 38

17 (19)
(1) 8
6.504
9,165
NM (11)
(3)%
2016

2,723 1,776 579

201-7
5,078

3,346 $ 2,036 762

7,431 3,192 1,898 (240)

6,144
12,222

7,556 3,176 1.788 (298)

12,281
$ 18,425 $ 17,300
■■: Gfange/j

23%
15
32
21
(2)
1
6 19

7%

(a) Consists primarily of credit valuation adjustments CCVA") managed centrally within CIB. funding valuation adjustments ("FVA") and debit valuation adjustments ("DVA") on derivatives. Results are primarily reported in principal transactions revenue. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets. For additional information, see Accounting and Reporting Developments on pages 80-81, and Notes 2, 3 and 17.

25

Quarterly results

Net income was $2.7 billion, up 9%, reflecting a lower provision for credit losses and lower noninterest expense on lower net revenue.

Net revenue was $8.9 billion, down 3%.

Banking revenue was $3.1 billion, up 17%. Investment banking revenue was $1.7 billion, up 14%, with strong performance across products. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Equity underwriting fees were $367 million, up 29%, driven by growth in industry-wide issuance including a strong IPO market. Debt underwriting fees were $933 million, up 5%, driven by a higher share of fees. Advisory fees were $503 million, up 8%, driven by a higher level of completed transactions. Treasury Services revenue was $1.1 billion, up 18%, driven by the impact of higher interest rates and growth in operating deposits. Lending revenue was $373 million, up 35%, reflecting lower fair value losses on hedges of accrual loans.

Markets & Investor Services revenue was $5.8 billion, down 11%. Fixed Income Markets revenue was $3.2 billion, down 19% compared to a strong prior-year quarter, predominantly driven by lower revenue in Rates, Credit, and Commodities. These declines were due to reduced flows driven by sustained low volatility and tighter credit spreads. Equity Markets revenue was $1.6 billion, down 1% compared to a strong prior-year quarter, driven by lower revenue in other derivatives related to market-making activities offset by higher revenue in corporate derivatives and Prime Services. Securities Services revenue was $982 million, up 8%, driven by the impact of higher interest rates and higher asset-based fees driven by global markets.

The provision for credit losses was a benefit of $53 million compared with an expense of $235 million in the prior year. The prior year primarily reflected an increase in the allowance for credit losses in the Oil & Gas portfolio.

Noninterest expense was $4.8 billion, down 5%, driven by lower performance-based compensation expense.

Year-to-date results

Net income was $6.0 billion, up 33%, reflecting higher net revenue, lower provision for credit losses and a tax benefit resulting from the vesting of employee-based stock awards.

Net revenue was $18.4 billion, up 7%.

Banking revenue was $6.1 billion, up 21%. Investment banking revenue was $3.3 billion, up 23%, driven by higher debt and equity underwriting fees, partially offset by lower advisory fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Debt underwriting fees were $1.9 billion, up 31%, driven by a higher share of fees and overall increase in industry-wide fee levels. Equity underwriting fees were $761 million, up 55%, driven by growth in industry-wide issuance including a stronger IPO market. Advisory fees were $1.0 billion, down 4%. Treasury Services revenue was $2.0 billion, up 15%, driven by the impact of higher interest rates and growth in operating deposits. Lending revenue was $762 million, up 32%, reflecting lower fair value losses on hedges of accrual loans and higher gains on securities received from restructurings.

Markets & Investor Services revenue was $12.3 billion, flat compared with the prior year. Fixed Income Markets revenue was $7.4 billion, down 2% from the prior year, driven by lower revenue in Commodities, Rates, and Credit, partially offset by higher revenue in Securitized Products. The lower revenue in Commodities, Rates, and Credit reflected reduced flows driven by low volatility in the second quarter, while higher revenue in Securitized Products was driven by strong demand in the first quarter. Equity Markets revenue was $3.2 billion, up 1%, driven by higher revenue in corporate derivatives and Prime Services offset by lower revenue from other derivatives related to market-making activities. Securities Services revenue was $1.9 billion, up 6%, driven by the impact of higher interest rates and higher asset-based fees driven by global markets. Credit Adjustments & Other was a loss of $240 million, largely driven by valuation adjustments.

The provision for credit losses was a benefit of $149 million compared with an expense of $694 million in the prior year. The prior year primarily reflected increases in the allowance for credit losses in the Oil & Gas and Metals & Mining portfolios.

Noninterest expense was $10.0 billion, up 1%.

26

Selected metrics

,i(ih 'millions.- except headcouht);

Selected balance sheet data (period-end)

Assets Loans: Loans retained1"

Loans held-for-sale and loans at fair value

Total loans

Core loans Equity

Selected balance sheet data (average)

Assets

Trading assets-debt and equity instruments Trading assets-derivative receivables Loans: Loans retained'31

Loans held-for-sale and loans at fair value

Total loans

Core loans Equity Headcount

."As-of6r.fcjrfjw.six mofifo'f

.2016 '

• Change.[1]

'r;' fended June-30; *;,=... •'" • <j. A]C(

3%

(3) 28 (2) (2) 9

6 15 (8)

(1) 74

1

1

9

1%

kCl^nge '2017'

112,637 5,600

(3) 28 (2) (2) 9

6 15 (11)

(1) S3

1

1

9

1%

3% $ 847,377 $ 826.019

118.237 117,821 64.000

806.717 295.770 62.007

110.190 3,187

108,935 7,168

116,103 115,764 70,000

851,425 340,073 56,931

113,377 112,919 64,000 48.805

109,204 5,550

114,754 114,375 70,000 49,228

(a) Loans retained includes credit portfolio loans, investment loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-and overdrafts.

Selected metrics

jjtih milHoni except ratios):

Credit data and quality statistics

Net charge-offs/(recoveries) Nonperforming assets: Nonaccrual loans:

Nonaccrual loans retained'[11]

Nonaccrual loans held-for-sale and loans at fair value

Total nonaccrual loans

Derivative receivables

Assets acquired in loan satisfactions'

Total nonperforming assets

Allowance for credit losses: Allowance for loan losses Allowance for lending-related commitments

Total allowance for credit losses

Net charge-off/(recovery) rate""

Allowance for loan losses to period-end loans retained

Allowance for loan losses to period-end loans retained, excluding trade finance and conduits'"

Allowance for loan losses to nonaccrual loans retained'"

Nonaccrual loans to total period-end loans

As^pr'fdr the 1sS:rno¥tHs;':;4:.---."y ■ ended June 30. .:■'■' 'C'..

136

(79)%

; 2016 **Change .**

29 $

462 31

623

7

493 170 71

630 220 75

734

925

1,298 745

1.669 715

(26) 343 (22) (23) (5) (21)

2,384 0.25% 1.48

2.23 268 0.53%

(22) 4

(14)%

2,043 0.05% 1.19

1.83 281 0.42%

a) Allowance for loan losses of $164 million and $211 million were held against these nonaccrual loans at June 30, 2017 and 2016. respectively.
b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
c) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

27

Investment banking fees

Three.months ended June 30, •

\(inmillioris)"

Advisory

Equity underwriting Debt underwriting **13' Total investment banking fees**

-2017.

503 367 933

1,803 $

2016*

466 285 885

1,636

29 5

10% $

1,004 761 1,850

3,615 $

1.051 490 1,416

\2016 <file:///2016>.;^:'GJjange;H

2,957

(4)% 55 31 22%

(a) Includes loans syndication.

League table results - wallet share

'Six months-ended. «June 30; 2017 ,-

.Share;')

Based on fees'"

Debt, equity and equity-related

Global U.S.

Long-term debt""

. Global U.S.

Equity and equity-related' 0

Global U.S. M&A"" Global U.S.

Loan syndications

Global U.S.

7.6% 11.1

7.7 10.8

7.4 11.6

8.6 9.1

9.6 12.0

7.1% 11.9

6.8 11.1

7.6

1 13.4

8.4 9.9

9.3 11.8

Global investment banking fees' 5

a) Source: Dealogic as of July 2. 2017. Reflects the ranking of revenue wallet and market share.
b) Long-term debt rankings include investment-grade, high-yield, supranational, sovereigns, agencies, covered bonds, asset-backed securities CABS") and mortgage-backed securities ("MBS"); and exclude money market, short-term debt, and U.S. municipal securities.
c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
d) Global M&A reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S.
e) Global investment banking fees exclude money market, short-term debt and shelf deals.

Markets revenue

The following table summarizes select income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue comprises principal transactions, fees, commissions and other income, as well as net interest income. The Firm assesses its Markets business performance on a total revenue basis, as offsets may occur across revenue line items. For example, securities that generate net interest income may be risk-managed by derivatives that are recorded in principal transactions. For a description of the composition of these income statement line items, see Notes 5 and 6.

Principal transactions reflects revenue on financial instruments and commodities transactions that arise from client-driven market making activity. Principal transactions revenue includes amounts recognized upon executing new transactions with market participants, as well as "inventory-related revenue", which is revenue recognized from gains and losses on derivatives and other instruments that the

Firm has been holding in anticipation of, or in response to, client demand, and changes in the fair value of instruments used by the Firm to actively manage the risk exposure arising from such inventory. Principal transactions revenue recognized upon executing new transactions with market participants is driven by many factors including the level of client activity, the bid-offer spread (which is the difference between the price at which a market participant is willing to sell an instrument to the Firm and the price at which another market participant is willing to buy it from the Firm, and vice versa), market liquidity and volatility. These factors are interrelated and sensitive to the same factors that drive inventory-related revenue, which include general market conditions, such as interest rates, foreign exchange rates, credit spreads, and equity and commodity prices, as well as other macroeconomic conditions. For the periods presented below, the predominant source of principal transactions revenue was the amount recognized upon executing new transactions.

threem'onthsended'june.adl;', ^.yVj

' 2oi6 /. •■' '

Fixed.lncbme" .Markets •
.Equity Markets

, Fixediineome Markets

. ..Equity /. .Markets -'Total:

Principal transactions
Lending- and deposit-related fees

Asset management, administration and commissions

All other income

Noninterest revenue

Net interest income

1,851 $ 48 103 207

2,209 1,007

1,109 $ 1

410 (2)

1,518 68

2,960 49 513 205

3,727 1,075

2.092 $ 60 101 397

2,650 1,309

938 $ 1

370 21

1.330 270

3,030 61 471 418

3,980 1,579

Total net revenue

cSix:ihonjth>-eiiq>d>4^'30ii

:,2016

[(in.mHlions);

Principal transactions

Lending- and deposit-related fees

Asset management, administration and commissions

All other income

Noninterest revenue

Net interest income

Fixed: income ' - Markets .. ,

4,552 $ 97 207 384

5,240 2,191

6,670 99 1,040 375

Total Markets

2,118 $ 2

2,944 248

833 (9)

8,184 2,439

■ -.Equity . *;.'.. A*

1.808 $ 1

813 21

5,885 110

1.017 642

.'Markets'TotaTMarKets.'j

5,011 2,545

2,643 533

4.077 $ 109 204 621

7,654 3,078

3,192 $ 10,623 $

Selected metrics

As of or for the. three months ended June 30;

' As'of or for the six months ended June 30,. ■

f;.(jn millibns.-exeept where otherwise rioted)

12,662 7,214 2,258

12,539 6,138 1,793

Assets under custody ("AUC") by asset class (period-end) (in billions):

Fixed Income

- Equity

Total AUC

Other[11]'

$ 22,134 $ 20,470

Client deposits and other third party liabilities (average)[11]" $ 404,920 $ 373.671

Trade finance loans (period-end) 17,356 17,362

1% 18 26

8

8

-%

12,539 6,138 1,793

$ 22,134 $ 20,470 $ 398,354 $ 366,299 17,356 17,362

1% 18 26

8

9

a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

29

International metrics

Asofor foTtfie tKree"montnsi* :T> ' ■>■ . ᵛended'jurie 30,"■■
i;(ih millions, except vyliere wherwiseinoted)-:

2017 ,; ; .2016^; .eharige ;;,,^ ■ :l^f:.^}yyMf^ii:^9!i^/Jff^SiiJ

3,034 $ 1,034 244

6,223 2,273 585

2.823 1.210 403

5,280 2,512 724

7% (15) (39) (3) (3) (3)

(10) (3) (32) (12) 5

(3)

16

7 16 13

1

8

18% (10) (19)

7

6

7

(10) (3) (32) (12) 5

(3)

14 12 11 13

2

9

Total net revenue[131] Europe/Middle East/Africa Asia/Pacific

4,312 4,577

9,081 9,344

4,436 4.729

8.516 8,784

Latin America/Caribbean

Total international net revenue

8,889 $ 9,165

$ 18,425 $ 17,300

North America

Total net revenue

26,690 14,709 6,196

$ 26,690 $ 14,709 6,196

29,770 15.198 9.048

29.770 15,198 9.048

Loans retained (period-end) [131]

Europe/Middle East/Africa Asia/Pacific

47,595 61,340

54.016 58,621

47,595 61,340

54,016 58,621

Latin America/Caribbean

Total international loans
Total loans retained
$ 108,935 $ 112,637

$ 150,436 $ 131,655

73,544 65,569

24,934 22,431

$ 248,914 $ 219,655

149,440 146,644

$ 398,354 $ 366.299

North America

t 108,935 $ 112.637

Client deposits and other third-party liabilities (average)' 3" 1"

Europe/Middle East/Africa $ 156,575$ 135.213

Asia/Pacific 73,327 68,423

$ 255,708 149,212

$ 225.970 147,701

Latin America/Caribbean " 25,806 22,334

Total international
$ 404,920 $ 373,671

North America

Total client deposits and other third-party liabilities
AUC (period-end)"" (in billions)

North America

All other regions

Total AUC

$ 13,207 $ 8,927

$ 22,134 $ 20,470

7 9

8%

13,207 8,927

$ 22,134 $ 20,470

7 9

8%

a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for -sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.
b) Client deposits and other third-party liabilities pertain to the Treasury Services and Securities Services businesses.

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COMMERCIAL BANKING

For a discussion of the business profile of CB, see pages 63-65 of JPMorgan Chase's 2016 Annual Report and Line of Business Metrics on page 174.

Selected income statement data

Six months ended June30; ;?.

(in millions)

Revenue

Lending- and deposit-related fees

Asset management, administration and commissions

All other income1*'

Noninterest revenue

Net interest income

Total net revenue""

Provision for credit losses

Noninterest expense

Compensation expense Noncompensation expense

Total noninterest expense

Income before income tax expense

Income tax expense

Net income

,2017

232 16 335

583 1,505

2,088 (130)

365 425

790

1,428 526

902

2016;,

227 18 341

586 1,231

1,817 (25)

322 409

731

1,111 415

696

■■'Change'.:; \'«.2017 :

467 34 681

1,182 2,924

4,106 (167)

736 879

2% (11) (2) (1) 22 15

(420)

1,615

13 4 8

2,658 957

1,701

29 27 30%

459 40 643

2016 .Change,."!

2% (15)

6

279

4 18 13

NM

656 788

12 12 12

40 36 43%

a) Includes revenue from investment banking products and commercial card transactions.
b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income related to municipal financing activities of $ 131 million and $ 124 million for the three months ended June 30, 2017 and 2016, respectively, and $252 million and $244 million for the six months ended June 30, 2017 and 2016, respectively.

Quarterly results

Net income was $902 million, an increase of 30%, driven by higher net revenue and a lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $2.1 billion, an increase of 15%. Net interest income was $1.5 billion, an increase of 22%, predominantly driven by higher deposit spreads and loan growth. Noninterest revenue was $583 million, relatively flat versus the previous year.

Noninterest expense was $790 million, an increase of 8%, predominantly driven by hiring of bankers and business-related support staff, and investments in technology.

The provision for credit losses was a benefit of $130 million, driven by net reductions in the allowance for credit losses, including in the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios. The prior year provision for credit losses was a benefit of $25 million.

Year-to-date results

Net income was $1.7 billion, an increase of 43%, driven by higher net revenue and a lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $4.1 billion, up 13%. Net interest income was $2.9 billion, up 18%, predominantly driven by higher deposit spreads and loan growth. Noninterest revenue was $1.2 billion, up 4%, driven by higher investment banking revenue from loan syndications and equity underwriting.

Noninterest expense was $1.6 billion, up 12%, largely driven by hiring of bankers and business-related support staff, and investments in technology.

The provision for credit losses was a benefit of $167 million, driven by net reductions in the allowance for credit losses, including in the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios. The prior year provision for credit losses was $279 million, reflecting downgrades in the Oil & Gas and Natural Gas Pipeline portfolios.

31

Selected income statement data (continued)

Three months ended June 30.

(in millions; except ratios)

Revenue by product

Lending

Treasury services Investment banking[1'"] Other

Total Commercial Banking net revenue

Investment banking revenue, gross[1"]

Revenue by client segment

Middle Market Banking[10] Corporate Client Banking[10] Commercial Term Lending Real Estate Banking Other

Total Commercial Banking net revenue

2016

917 680 207 13

- 2017

1,023 854 189 22

595

689 608 342 107 71

2,088 $ 1,817

524

839 662 364 147 76

$ 2,088 $ 1,817

Change

12%

26

(9)

69

15

(12)

22

9

6 37

7

15%
2017^;

2,015 1,650 405 36

4,106 $

1,170 $

1,623 $ 1,328

731

281

143

4,106 $
2016

1,845 1.374 362 39

3.620

1,078

1.389 1,162 703 211 155

3,620
Change

9% 20 12 (8) 13

17 14 4

33 (8) 13%

Financial ratios

Return on equity Overhead ratio

17% 38

16% 40

16% 39

14% 40

a) Includes total Firm revenue from investment banking products sold to CB clients, net of revenue sharing with the CIB.
b) Represents total Firm revenue from investment banking products sold to CB clients.
c) Certain clients were transferred from Middle Market Banking to Corporate Client Banking effective in the second quarter of 2017. Prior period results were revised to conform with the current period presentation.

32

Selected metrics

;.Asqf or for the three months *".» ended June-30|„ ,,.

As'of bpfdrTthe six '.mbnths<$i;i?f i; ended June 30;,, • ,;; i^jfii

LOamillions. except h'eadcbiint)

Selected balance sheet data (period-end)

Total assets Loans: Loans retained

Loans held-for-sale and loans at fair value

Total loans

Core loans Equity

Period-end loans by client segment

Middle Market Banking[18]' Corporate Client Banking[13]' Commercial Term Lending Real Estate Banking Other

Total Commercial Banking loans

:2017,

"^2016; ^.,2&C!wnge;g

197,912 1,661

10 NM 11 11 25

9 8 11 30 21 11

6% $ 220,676 $ 208.151

179,298 178.809 16,000

51,949 42.374 66,499 12,872 5.604

179,164 134

$ 199,573 $ 199,319 20,000

$ 56,377 $ 45,918 73,760 16,726 6,792

$ 199,573 $ 179.298

Selected balance sheet data (average)

Total assets Loans: Loans retained

Loans held-for-sale and loans at fair value

Total loans

Core loans

Average loans by client segment

Middle Market Banking[1]" Corporate Client Banking'" Commercial Term Lending Real Estate Banking Other

Total Commercial Banking loans

Client deposits and other third-party liabilities Equity

Headcount

176,229 583

$ 217,694 $ 205,953

176,812 176,251

51,937 41,111 65.262 12,936 5,566

196,454 1,402

$ 197,856 $ 197,567

;$ 55,651 $ 46,483 73,081 16,139 6,502

170,717 16,000

8,127

$ 197,856 $ 176,812

173,214 20,000

8,823

11 140 12 12

7 13 12 25 17 12

1

25

9%

173,033 516

$ 215,750 $ 204,222

173,549 172.939

51,246 40.231 64.369 12,200 5.503

193,630 1,061

$ 194,691 $ 194,391

$ 54,963 $45,041 72,484 15,834 6,369

171,898 16,000

8,127

$ 194,691 $ 173,549

174,987 20,000

8,823

12 106 12 12

7 12 13
30 16 12

2 25

9%

(a) Certain clients were transferred from Middle Market Banking to Corporate Client Banking effective in the second quarter of 2017. Prior period results were revised to conform with the current period presentation.

Selected metrics (continued)

Credit data and quality statistics

Net charge-offs/(recoveries) Nonperforming assets Nonaccrual loans:

Nonaccrual loans retained[131]

Nonaccrual loans held-for-sale and loans at fair value

Total nonaccrual loans

Assets acquired in loan satisfactions

Total nonperforming assets

Allowance for credit losses: Allowance for loan losses Allowance for lending-related commitments

Total allowance for credit losses

Net charge-off/(recovery) rate'"[1] Allowance for loan losses to period-end loans retained Allowance for loan losses to nonaccrual loans retained" Nonaccrual loans to period-end total loans

>As;bf brfof thes1x:mohthsJ^;;^ •> .'.ended June 30,--1 ••>? V%5"V>*

60
(2)
66
NM

Q20i6^/2chan'ge ,.,2017 ;jJZj-: 2QV6i^ •;■ VjCTange'^

819
1.258
1.258

(87)% $

(35)%

(35) 300 (35)

(12) 46

(8)%

(35)

819 4

1,258 1

1,258 1

1.259

823

1,259

3.041 226

3.041 226

2,678 331

(35) 300 (35)

3,009 -<)1.35 327 0.41

3,267 0.14% 1.70 242 0.70

(12) 46

(8)%

-%

3,267 0.08% 1.70 242 0.70

a) Allowance for loan losses of $112 million and $292 million was held against nonaccrual loans retained at June 30, 2017 and 2016, respectively.
b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET & WEALTH MANAGEMENT

For a discussion of the business profile of AWM, see pages 66-68 of JPMorgan Chase's 2016 Annual Report and Line of Business Metrics on pages 174-175.

Selected income statement data

^itvjmllibns, except-'raUos);.

Revenue

Asset management, administration and commissions All other income

Noninterest revenue

Net interest income

Total net revenue

Provision for credit losses

Noninterest expense

Compensation expense Noncompensation expense

Total noninterest expense

Income before income tax expense

Income tax expense

Net income

Revenue by line of business

Asset Management Wealth Management

Total net revenue

2,211 155

2.102 90

.Three months ended June 30; |. ' \ 2017 . v ., 2016. Change

2,366 846

2.192 747

5% 72

3,212 4

1,278 914

2,939 (8)

1.249 849

8 13

9

NM

2,192

2.098

2 8 4

1,016 392

849 328

624 $

521

1,561 $ 1,651

1,424 1,515

20 '20 20

10 9
9%
$ 3,212 $ 2,939
2017.
.2016
Six months ended June 30,
4,316 $ 318
4.118 319
Change;
4,634 1,665
4.437 1,474

5%

6,299 22

2,609 2,163

4
5.911

5

2,490 1.683
13 7

340
4,772
4.173

5 29 14
1,505 496
1,733 625
1,009 $ 1,108
3,048 3,251
2.923 2.988

(13) (21) (9)

4 9
7%
% 6,299 $ 5.911

Financial ratios
Return on equity Overhead ratio Pre-tax margin ratio:
Asset Management
Wealth Management
Asset & Wealth Management

27% 68

31 33 32

22% 71

30 28 29

22% 76

16 31 24

24% 71

31

27 29

Quarterly results

Net income was $624 million, an increase of 20%, reflecting higher net revenue partially offset by higher noninterest expense.

Net revenue was $3.2 billion, an increase of 9%. Net interest income was $846 million, up 13%, driven predominantly by higher deposit spreads. Noninterest revenue was $2.4 billion, up 8%, predominantly reflecting higher market levels.

Noninterest expense was $2.2 billion, an increase of 4%, largely driven by a combination of higher external fees and compensation expense on higher revenue.

Year-to-date results

Net income was $1.0 billion, a decrease of 9%, reflecting higher noninterest expense, largely offset by higher revenue.

Net revenue was $6.3 billion, an increase of 7%. Net interest income was $1.7 billion, up 13%, driven by higher deposit spreads. Noninterest revenue was $4.6 billion, up 4%, driven by higher market levels and brokerage revenue, partially offset by a reduction in revenue related to the disposal of assets at the beginning of 2016.

Noninterest expense was $4.8 billion, an increase of 14%, driven by higher legal expense and compensation expense on higher revenue.

35

Selected metrics

; JTAs of or-fof;. thethree, months -;.<•'•'. ended June 30; ..
, As-df.or'mr.thesi.x months,;,-} ,s! »> : JT •- ended,June 30,^.Lit .A'/'il

VOn'mi^

% of JPM mutual fund assets rated as 4- or 5-star*al(0 -% of JPM mutual fund assets ranked in Isl or 2"" quartile:""

1 year

3 years[10]

5 years[10]

Selected balance sheet data (period-end)

Total assets Loans Core loans Deposits Equity

Selected balance sheet data (average)

Total assets Loans

Core loans Deposits Equity

Headcount

Number of client advisors

Credit data and quality statistics

Net charge-offs Nonaccrual loans Allowance for credit losses:

Allowance for loan losses

Allowance for lending-related commitments

Total allowance for credit losses

Net charge-off rate

Allowance for loan losses to period-end loans Allowance for loan losses to nonaccrual loans Nonaccrual loans to period-end loans
65%

60 83 77

$ 147,508 124,517 124,517 146,758 9,000

$ 140,585 120,252 120,252 154,776 9,000

22,289

2,452

$ 5 400

285 10
51%

54 74 79

$ 134.380 113,319 113.319 148,967 9,000

$ 131.529 111.704 111,704 151,214 9,000

20.897

2,622

$ 2 254

258 4
j/^?pi7'?Pi.? ..,'>.. Change1 fg^;.,: 201? ^:...
65%

10% 10 10 (1)

60 83 77

$ 147,508 124,517 124,517 146,758 9,000

7

(6)

57

10 150 13%

$ 142,966 122,173 122,173 150,786 9,000

22,289

2,452

$ 2 400

295 0.01% 0.23 71 0.32

262 0.01°/ 0.23

102 0.22

285 10

295 0.01% 0.23 71 0.32

10% 10 10 (1)

7

(6)

(55) 57

10 150 13%

a) Represents the "overall star rating" derived from Morningstar for the U.S.. the U.K.. Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.
b) Quartile ranking sourced from: Upper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K.. Luxembourg and Hong Kong domiciled funds: Nomura for Japan domiciled funds and Fund Doctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds. Undiscovered Managers Fund, and Brazil and India domiciled funds.
c) Prior period amounts were revised to conform with current period presentation.

36

Client assets

Client assets of $2.6 trillion and assets under management of $1.9 trillion were both up 11%, reflecting higher market levels, and net inflows into liquidity and long-term products.

Client assets

Jjqi7, .;• '■ 201'fr;- jChange.;

Assets by asset class Liquidity Fixed income Equity
Multi-asset and alternatives

Total assets under management

Custody/brokerage/administration/deposits
Total client assets

434 440 390 612

1,876

722
2,598 $

385 424 342 542

1,693

651
2,344

13%
4 14 13
11

11 11

Memo:
Alternatives client assets(a)

Assets by client segment
Private Banking
Institutional
Retail

159 $

488 889 499

151

425 811 457

15 10 9

Total assets under management

Private Banking
Institutional
Retail
Total client assets

(a) Represents assets under management, as well as client balances in brokerage accounts. Client assets (continued)
1,876 $

1,188 909 501
2,598 $
1.693

1,058 827 459
2,344
11

12 10 9 11%
.Three months i I.ended Jiirie 30;
r~six'. mbntfi's' T"■"" t' ended June 30. .'

(in billions)

Assets under management rollforward

Beginning balance Net asset flows:

Liquidity

Fixed income

Equity

Multi-asset and alternatives Market/performance/other impacts

2017

1,841 $

(7) 2

(3) 10 33

,2016,

1,676 $

1

13 (5) (2) 10

; ,2017.

1,771 $

(6) 7

(7)

17

94

; 2016;)

1,723

(29) 27 (10) 4

(22)

Ending balance, June 30

Client assets rollforward

Beginning balance Net asset flows

Market/performance/other impacts

2,548 2 48

2,323 2 19

2,453 12 133

2,350 (5) (1)

Ending balance, June 30

37

International metrics

Asof on for the rJir.ee.mpnths",; I ; ' *'^'as of of fbr'thesix months;* ended. June 30,.$-%--X?* *;•> . ended June 30 ' 'ri'

, .2016 ; Change-^,2Q]^ y^;^^,;^Jj6y^^Changej

Total net revenue[a]

Europe/Middle East/Africa Asia/Pacific

Latin America/Caribbean

Total international net revenue

North America

Total net revenue

494 $

286

222

1,002 2,210

3,212 $

463 267 186

916 2.023

2.939

7% 7 19

9 9

9%

956 $

556

401

1,913 4,386

6,299 $

894 522 358

1.774 4.137

5,911

7% 7 12

8 6

7%

(a) Regional revenue is based on the domicile of the client.

< (in billions)-:

Assets under management

Europe/Middle East/Africa Asia/Pacific

Latin America/Caribbean

Total international assets under management
North America

Total assets under management

Client assets

Europe/Middle East/Africa Asia/Pacific

Latin America/Caribbean

Total international client assets North America

Total client assets
2017
As of. br.forthethree months ,:" ended-June 30; .

335 $ 136 57

293 124 46

.2016^; .Change;

14%

10

528 1,348

463 1,230

24

14

1.693

10

11

342 176 115

13 11 32

16 9

11%

1,876 $

387 $

196

633 1,711

152

2.344

735 1,863

2,598 $

Asof. or for the [1] six.mbnths;' ■ -V \ J- ehded.June;30.' v';

335 136 57

293 124 46

_2017 V .'2016 "Change*"

14%

10

528 1,348

463 1,230

24

1,876 $ 1,693

14 10

387 $

196

152

342 176 115

11

13 11

735 1,863

633 1,711

32

16

2,598 $

2,344

9

11%

38

CORPORATE

For a discussion of Corporate, see pages 69-70 of JPMorgan Chase's 2016 Annual Report.

Selected income statement and balance sheet data

;:(in rnillions.except headcount).

Revenue

Principal transactions Securities gains/dosses) All other income/(loss)[li']

Noninterest revenue

Net interest income

Total net revenue"" Provision for credit losses Noninterest expense[111]

Income/doss) before income tax expense/(benefit)

Income tax expense/tbenefit)

Net income/doss)

Total net revenue Treasury and CIO Other Corporate

Total net revenue

Net income/doss)

Treasury and CIO Other Corporate

Total net income/doss)

Total assets (period-end) Loans (period-end) Core loans"" Headcount
; .Asof or for We sixrhonthsf i '■ ' ehded'June 30,; ' ' ^ _j

29% NM 200

94

86 NM

100

NM

NM NM NM

NM 221 NM

74 NM NM

5

(9) (9) 10

Change,■■■■'2017.: _ ; .••{2pi6-;!-^:'Qii(tfe|

163 (37) 728

126 71 243

854 (75)

440 (542)
779

(102) (3) (120)

410% $ NM 447 357 NM NM
281

100

498 (107)

21 219

NM

435
605 $
(198)

(82)

NM $

(320) 218
79

700
$ 779 $
(102)

NM NM NM

(81) 686

(310) 112
605 $
(198)

$817,754$ 778,359

1,6961.862

1,6961,857

33,46430,402

93 NM NM

5

(9) (9) 10

a) Included revenue related to a legal settlement of $645 million for both the three and six months ended June 30, 2017.
b) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $237 million and $227 million for the three months ended June 30, 2017 and 2016, respectively, and $465 million and $445 million for the six months ended June 30, 2017 and 2016, respectively.
c) Included legal expense/tbenefit) of $16 million and $(467) million for the three months ended June 30, 2017 and 2016, respectively, and $(212) million and $(465) million for the six months ended June 30, 2017 and 2016, respectively.
d) Average core loans were $1.6 billion and $2.0 billion for the three months ended June 30. 2017 and 2016, respectively, and $1.6 billion and $2.0 billion for the six months ended June 30, 2017 and 2016, respectively.

Quarterly results

Net income was $570 million, compared with a net loss of $166 million in the prior-year quarter. Net revenue was a gain of $804 million, compared with a loss of $158 million in the prior-year quarter. Current quarter net revenue was driven by a $645 million benefit from a legal settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts and by the net impact of higher rates. Noninterest expense was $183 million, up $456 million from the prior year quarter, which included a net legal benefit.

Year-to-date results

Net income was $605 million, compared with a net loss of $198 million in the prior year. Net revenue was a gain of $779 million, compared with a loss of $102 million in the prior-year. Current period net revenue was driven by a $645 million benefit from a legal settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts and by the net impact of higher rates. Noninterest expense was $281 million, up $401 million from prior year, driven by lower legal benefit and higher compensation expense.

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Treasury and CIO overview

At June 30, 2017, the average credit rating of the Treasury and CIO investment securities comprising the portfolio in the table below was AA+ (based upon external ratings where available and, where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 9 for further information on the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 67-71. For information on interest rate, foreign exchange and other risks, see Market Risk Management on pages 72-76.

Selected income statement and balance sheet data

as of or for the three months 'ended June 30. \' 's

: As of'or for the six months' ' ended.June 30,- '

(in millions)

Securities gains/dosses)

AFS investment securities (average) HTM investment securities (average)

Investment securities portfolio (average)

AFS investment securities (period-end) HTM investment securities (period-end)

Investment securities portfolio (period-end)

(34) $

225,053 48,232

273,285

213,291 47,761

261,052

20

225.536 53,426

278.962

221.751 53,811

275.562

NM

(10)

(2)

(4) (11)
(5)%
(49) J

229,920 48,794
278,714

213,291 47,761
261,052
71

230.321 50,882
281.203

221,751 53.811
275,562
NM

(4) (1) (4) (11) (5)

40

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part ofJPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of the Firm.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's approach to risk management covers a broad spectrum of economic and other core risk areas, such as credit, market, liquidity, model, principal, country, operational, compliance, conduct, legal, capital, and reputation risk, with controls and governance established for each area, as appropriate.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management by each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm's Operating Committee, which consists of the Firm's Chief Executive Officer ("CEO"), Chief Risk Officer ("CRO"), Chief Financial Officer ("CFO") and other senior executives, is the ultimate management escalation point in the Firm and may refer matters to the Firm's Board of Directors. The Operating Committee is responsible and accountable to the Firm's Board of Directors.

In June 2017, the Firm announced the departure of its Chief Operating Officer. As a result, his responsibilities have transitioned to other members of the Operating Committee. The Chief Investment Officer/Treasurer now reports to the Firm's CFO, and will continue to chair the Firmwide Asset Liability Committee ("ALCO"). For further discussion on the Firm's ALCO, see page 75 of JPMorgan Chase's 2016 Annual Report.

The Firm strives for continual improvement through efforts to enhance controls, ongoing employee training and development, talent retention, and other measures. The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes.

The following provides an index of where in this Form 10-Q and in JPMorgan Chase's 2016 Annual Report information about the Firm's management of its key risks can be found.

CAPITAL RISK MANAGEMENT

Capital risk is the risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during both normal economic environments and under stressed conditions. For a discussion of the Firm's Capital Risk Management, see pages 76-85 ofJPMorgan Chase's 2016 Annual Report.

A strong capital position is essential to the Firm's business strategy and competitive position. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative of the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and robust liquidity. The Firm's capital risk management strategy focuses on maintaining long-term stability to enable it to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength.

The Firm's capital risk management objectives are achieved through the establishment of minimum capital targets and a strong capital governance framework. Capital risk management is intended to be flexible in order to react to a range of potential events. The Firm's minimum capital targets are based on the most binding of three pillars: an internal assessment of the Firm's capital needs; an estimate of required capital under the Comprehensive Capital Analysis and Review ("CCAR") and Dodd-Frank Act stress testing requirements; and Basel III Fully Phased-In regulatory minimums. Where necessary, each pillar may include a management-established buffer. The capital governance framework requires regular monitoring of the Firm's capital positions, stress testing and escalation protocols, both at the Firm and material legal entity levels.

The following tables present the Firm's Transitional and Fully Phased-In risk-based and leverage-based capital metrics under both the Basel III Standardized and Advanced Approaches. The Firm's Basel III ratios exceed both the Transitional and Fully Phased-In regulatory minimums as of June 30, 2017, and December 31, 2016. For further discussion of these capital metrics and the Standardized and Advanced approaches, refer to Strategy and Governance on pages 78-82 of JPMorgan Chase's 2016 Annual Report.

aJJ /Fully. Phased-In

IJune:30,2017 ; ■i(ih.rnillions,,except.rati6s)>:

Risk-based capital metrics:

CETl capital Tier l capital Total capital Risk-weighted assets CETl capital ratio Tier 1 capital ratio Total capital ratio Leverage-based capital metrics Adjusted average assets [181] Tier l leverage ratio"" Total leverage exposure SLR[cl]

Minimum.. Advanced' ■ •[k]; capital ratibf"[1]..

$ 186,942	$ 186,942
212,353	212,353
7.5% 9.0 11.0	
243,061	233,345
1,478,816	1,459,196

12.6% 12.8%
14.4 14.6
16.4 16.0
4.0%
NA NA

I 2,512,120 $ 2,512,120

8.5% 8.5%

$ 3,193,072

6.7%

Standardized'. Advanced

$ 186,596 $ 186,596
212,221 212,221
241,742 232,026
1,488,511 1,469,473
12.5% 12.7%
14.3 14.4
16.2 15.8
NA NA

$ 2,512,679 8.4%
$ 3.193,632 6.6%
Minimum, ' capital;ratioj'«);j

10.5%
12.0
14.0

4.0%

■; ,'Fully.Phased-In
*December31-..20l6 ycinrmillibns. except ratios)
Risk-based capital metrics:
CETl capital Tier l capital Total capital Risk-weighted assets CETl capital ratio Tier 1 capital ratio Total capital ratio Leverage-based capital metrics Adjusted average assets'[81] Tier l leverage ratio"" Total leverage exposure SLR[cl]

.Standardized'

; 182.967 208.112 239,553 1,464.981 12.5% 14.2 16.4

i 2,484,631 8.4%
NA NA

Advanced

i 182.967 208.112 '228,592 1,476.915 12.4% 14.1 15.5

$ 2.484,631

8.4%

$ 3.191,990 6.5%
Minimum. ...' ;.,d^!jatift*-.J,>

6.25%
7.75
9.75

NA
Standardized:

; 181.734 207,474 237,487 1,474,665 12.3% 14.1 16.1

Advanced

I 181.734 207,474 226,526 1,487,180 12.2% 14.0 15.2

$ 2,485,480 $ 2.485,480 8.3% 8.3%

NA $ 3.192.839 NA 6.5%

Minimum. j capital:ratios"! j

10.5%
12.0
14.0

4.0%

5.0%

Note: As of June 30, 2017, and December 31. 2016, the lower of the Standardized or Advanced capital ratios under each of the Transitional and Fully Phased-In approaches in the table above represents the Firm's Collins Floor, as discussed in Risk-based capital regulatory minimums on page 44.

a) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gams/dosses) on available-for-sale ("AFS") securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to net operating loss ("NOO'and tax credit carryforwards.
b) The Tier l leverage ratio is calculated by dividing Tier l capital by adjusted average assets.
c) The SLR leverage ratio is calculated by dividing Tier 1 capital by total leverage exposure. For additional information on total leverage exposure, see SLR on page 46.
d) Represents the Transitional minimum capital ratios applicable to the Firm under Basel III as of June 30, 2017, and December 31, 2016. At June 30. 2017. the CETI minimum capital ratio includes 1.25% resulting from the phase in of the Firm's 2.5% capital conservation buffer and 1.75%, resulting from the phase in of the Firm's 3.5% GSIB surcharge. At December 31, 2016. the CETI minimum capital ratio includes 0.625% resulting from the phase in of the Firm's 2.5% capital conservation buffer and 1.125%. resulting from the phase in of the Firm's 4.5% GSIB surcharge.
e) Represents the minimum capital ratios applicable to the Firm on a Fully Phased-In Basel III basis. At June 30. 2017. and December 31, 2016, the ratios include the Firm's estimate of its Fully Phased-In U.S. GSIB surcharge of 3.5%. The minimum capital ratios will be fully phased-in effective January 1.2019.
f) In the case of the SLR, the Fully Phased-In minimum ratio is effective beginning January 1, 2018.

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Basel III overview

Capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries. Basel III sets forth two comprehensive approaches for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). Certain of the requirements of Basel III are subject to phase-in periods that began on January l, 2014 and continue through the end of 2018 ("transitional period").

Basel III establishes capital requirements for calculating credit risk and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its bank regulators. For additional information on Basel III methodology refer to Basel III Overview on pages 78-80 of JPMorgan Chase's 2016 Annual Report.

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate SLR. For additional information on SLR, see page 46.

Basel III Fully Phased-In

Basel III capital rules will become fully phased-in on January 1, 2019, at which point the Firm will continue to calculate its capital ratios under both the Basel III Standardized and Advanced Approaches. The Firm manages each of the businesses, as well as the corporate functions, primarily on a Basel III Fully Phased-ln basis.

For additional information on the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.'s capital, RWA and capital ratios under the Basel III Standardized and Advanced Fully Phased-ln rules and SLRs calculated under the Basel III Advanced Fully Phased-ln rules, all of which are considered key regulatory capital measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 15-17.

The Firm's estimates of its Basel III Standardized and Advanced Fully Phased-ln capital, RWA and capital ratios and of SLRs for the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. are based on the current published U.S. Basel III rules and on the application of such rules to the Firm's businesses as currently conducted. The actual impact on the Firm's capital ratios and SLR as of the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

Risk-based capital regulatory minimums The capital adequacy of the Firm and its national bank subsidiaries, both during the transitional period and upon full phase-in, is evaluated against the lower of the two ratios as calculated under the Basel III approaches (Standardized or Advanced) as required by the Collins Amendment of the Dodd-Frank Act (the "Collins Floor"). At June 30, 2017, the Firm's Basel ill Standardized Fully Phased-ln CETl ratio became the current binding constraint. The Firm anticipates that the Basel III Standardized Fully Phased-ln CETl ratio will remain its binding constraint.

The Basel III rules include minimum capital ratio requirements that are subject to phase-in periods through the end of 2018. In addition to having to maintain the CETl minimum capital ratio of 4.5%, the Firm is also required to hold additional amounts of capital to serve as a "capital conservation buffer." As an expansion of the capital conservation buffer, the Firm is also required to hold additional levels of capital in the form of a GSIB surcharge and a countercyclical capital buffer. For additional information on minimum capital ratios, the capital conservation buffer, the countercyclical buffer, and the GSIB surcharge, refer to Risk-based capital regulatory minimums on pages 79-80 of JPMorgan Chase's 2016 Annual Report.

The Firm believes that it will operate with a Basel III CETl capital ratio between 11% and 12.5%. It is the Firm's intention that the Firm's capital ratios continue to meet regulatory minimums as they are fully implemented in 2019 and thereafter.

The following table represents the ratios the Firm and its IDI subsidiaries must maintain to meet the definition of "well-capitalized" under the regulations issued by the Federal Reserve and the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"), respectively.

I-- ' '". ■■ v '..'.' • w&G&v^tt&'nifcp \ '■: v- -y

\}k".;i< :,.;v;,BiicZ?Z-r^.Z£^M£'iM

Capital ratios		
CETl	-% 6.5%	
Tier 1 capital	6.0 8.0	
Total capital	10.0	10.0
Tier 1 leverage	- 5.0	

Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 18. For further information on the Firm's Basel III measures, see the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (<http://>investor.shareholder.com/jpmorganchase/basel.cfm <http://investor.shareholder.com/jpmorganchase/basel.cfm>).

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Capital

The following table presents reconciliations of total stockholders' equity to Basel III Fully Phased-ln CETl capital, Tier l capital and Basel III Advanced and Standardized Fully Phased-ln Total capital as of June 30, 2017 and December 31, 2016.

For additional information on the components of regulatory capital, see Note 18.

June 30, :"; 2017

, (in millions)

Capital components

254.190 26,068
258,483

26,068

December 31, i ■■■■ 2016V

Total stockholders' equity
228,122

Less: Preferred stock

Common stockholders' equity 232,415

47,288 862

Less:

Goodwill 47.300

Other intangible assets 827

3.230 1.468

Add:

Deferred tax liabilities[111] 3.252
181.734
186,596

26,068 328

Less: Other CETl capital adjustments 944

26,068 443

Standardized/Advanced Fully Phased-In CETl capital

Preferred stock Less:
212,221 $ 207,474

Other Tier 1 adjustments'"[1]

Standardized/Advanced Fully Phased-In Tier 1 capital $

a) Includes the remaining balance of accumulated other comprehensive income ("AOCI") related to AFS debt securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans that will qualify as Basel III CETl capital upon full phase-in.
b) Predominantly includes regulatory adjustments related to changes in DVA, as well as CETl deductions for defined benefit pension plan assets and deferred tax assets related to NOL and tax credit carryforwards.
c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CETl capital upon full phase-in.
d) Includes minority interest and the Firm's investments in its own CETl capital instruments.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CETl capital, Tier 1 capital and Tier 2 capital for the six months ended June 30, 2017.

2017

{Sixjnonths ended June 30. '. t(in-millions)

12.654 (3,606) (4,515) (1.023) 682 140 530

Standardized/Advanced CETl capital at December 31, 2016 t 181,734
4,862

Net income applicable to common equity Dividends declared on common stock Net purchase of treasury stock Changes in additional paid-in capital

Changes related to AOCI Adjustment related to DVA'[Jl] Other

Increase in Standardized/Advanced CETl capital

Standardized/Advanced CETl capital at June 30, 2017 ' $ 186,596

Long-term debt and other instruments

.qualifying as Tier 2 capital	$ 15,157 $	15.253
Qualifying allowance for credit losses	14,480	14.854

$ 29,521
30,013

Other (116) (94)

Standardized Fully Phased-In Tier 2 capital
$ 207,474

Standardized/Advanced Tier 1 capital at December 31, 2016
4,747

Change in CETl capital 4,862 Net issuance of noncumulative perpetual preferred stock -Other (115)

Increase in Standardized/Advanced Tier 1 capital

Standardized/Advanced Tier 1 capital at June 30, 2017 $ 212,221

(9.716)
(10.961)
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital

Advanced Fully Phased-In Tier 2 capital $ 19,805 $ 19,052 Advanced Fully Phased-In Total capital $ 232,026 $ 226,526

a) Represents deferred tax liabilities related to tax-deductible goodwill and identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.
b) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule) acquired after December 31, 2013. The deduction was not material as of June 30. 2017 and December 31, 2016.

The following table presents reconciliations of the Firm's Basel III Transitional CETl capital to the Firm's estimated Basel III Fully Phased-In CETl capital as of June 30, 2017 and December 31, 2016.

182,967 (156) (695) (312) (70)

186,942 $

70 (264) (151)

(1)

- June30, DecemBer'3T,)

"(in'millions), .. " .-»..;.'-■ .2017 , 20161

Transitional CETl capital

AOCI phase-in"[1]

CETl capital deduction phase-in'"[1] Intangibles deduction phase-in[10] Other adjustments to CETl capital'"[1]

Standardized Tier 2 capital at December 31, 2016

Change in long-term debt and other instruments qualifying as Tier 2

Change in qualifying allowance for credit losses Other

Decrease in Standardized Tier 2 capital

Standardized Tier 2 capital at June 30, 2017

Standardized Total capital at June 30, 2017

Advanced Tier 2 capital at December 31, 2016

Change in long-term debt and other instruments qualifying as Tier 2

Change in qualifying allowance for credit losses Other

Decrease in Advanced Tier 2 capital

Advanced Tier 2 capital at June 30, 2017

Advanced Total capital at June 30, 2017

(a) Includes DVA recorded in other comprehensive income ("OCI").

$ 30,013

(97) (374) (21)

(492)

$ 29,521

$ 241,742

$ 19,052

(97)

871

(21)

753

$ 19,805

$ 232,026

Fully Phased-In CETl capital

45

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the six months ended June 30, 2017. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Six months ended vjune 30, 2017 . :' ? (in millions) .

Credit.risk RWA

' Standardized'

Market risk ' •RWA -

.Credit risk ' RWA ,..

' Advanced

Operational risk.' -■ RWA . ■

At December 31, 2016

Model & data changes'[3]' Portfolio runoff'" Movement in portfolio levels'"

Changes in RWA

5.039 4,289

(3.900) (8,700) 17.180

1,139 (8,700) 21,407

(3.120) (10,400) (13.515)

$ 1,346,986 $ 127,679 $ 1,474,665 $ 959,523- $ 127,657 $ 400,000 $ 1,487,180

5,039

1,919 (10,400) (9,226)

4.580
9,266
13,846
(27.035)
9.328
4.227

(17,707)

$ 1,351,566 $ 136.945 $ 1,488,511 $ 932,488 $ 136,985 $ 400,000 $ 1,469,473

a) Model & data changes refer to movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).
b) Portfolio runoff for credit risk RWA primarily reflects (under both the Standardized and Advanced approaches) reduced risk from position rolloffs in legacy portfolios in Mortgage Banking and the sale of substantially all of the student loan portfolio during the second quarter of 2017 .
c) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, credit quality, and market movements: and for market risk RWA refers to changes in position and market movements.

Supplementary leverage ratio

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. For additional information on SLR, see Capital Risk Management on page 82 of JPMorgan Chase's 2016 Annual Report.

June 30,. 2017

The following table presents the components of the Firm's Fully Phased-ln SLR as of June 30, 2017 and December 31, 2016.

Tier 1 Capital

/:. 20161

$ 212,221 $ 207,474

Total average assets 2.559,236 2,532,457

Less: Adjustments for deductions from

2,512,679 680,953

2,485,480 707,359

Tier 1 capital 46,557 46.977

$ 3,193,632 $ 3,192.839

Total adjusted average assets'[3]' Off-balance sheet exposures'"

SLR

6.5%

Total leverage exposure

6.6%

a) Adjusted average assets, for purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier l capital, predominantly goodwill and other intangible assets.

b) Off-balance sheet exposures are calculated as the average of the three month-end spot balances during the quarter.

As of June 30, 2017, the Firm estimates that JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s Fully Phased-In SLRs are approximately 6.7% and 10.9%, respectively.

Line of business equity

The Firm's framework for allocating capital to its business segments (line of business equity) is based on the following objectives:

- Integrate Firmwide and line of business capital risk , management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business.

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons and regulatory capital requirements. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity

■;:-"Jurie:30J • «• December 3i;.i

Consumer & Community Banking

Corporate & Investment Bank

Commercial Banking

Asset & Wealth Management

Corporate

51.0 64.0 16.0 9.0 88.1
'(in billions) -
232.4 $
228.1

51.0 70.0 20.0 9.0 82.4

Total common stockholders' equity $

The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fully Phased-In RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the business segments was updated. For additional information on the new methodology, see Business Segment Results on pages 18-40.

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Planning and stress testing

Comprehensive Capital Analysis and Review The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. Through the CCAR process, the Federal Reserve evaluates each bank holding company's ("BHC") capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On June 28, 2017, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2017 capital plan.

Capital actions

Preferred stock

Preferred stock dividends declared were $411 million and $823 million for the three and six months ended June 30, 2017.

For additional information on the Firm's preferred stock, see Note 22 ofJPMorgan Chase's 2016 Annual Report.

Common stock dividends

On May 16, 2017, the Firm announced that its Board of Directors had declared a quarterly common stock dividend of $0.50 per share, effective with the dividend paid on July 31, 2017. On June 28, 2017, the Firm announced that its Board of Directors intends to increase the quarterly common stock dividend to $0.56 per share, effective the third quarter of 2017. The Firm's dividends are subject to the Board of Directors' approval at the customary times those dividends are to be declared.

Common equity

Effective as of June 28, 2017, the Firm's Board of Directors authorized the repurchase of up to $19.4 billion of common equity (common stock and warrants) between July 1, 2017 and June 30, 2018.

The following table sets forth the Firm's repurchases of common equity for the three and six months ended June 30, 2017 and 2016. There were no warrants repurchased during the three and six months ended June 30, 2017 and 2016.

> ':' ■:■ > . , ' '" "Three months ended, " "six?mon'ths ended51

ſ "v gitjimilliqns)	.;-• June30, J 2017 _:•	■ _ June30, . .2016 ~j	",.>J ■?°-└7; ..". gqjffi	
Total shares of common stock repurchased	35.0	45.8	67.1	75.0
Aggregate common stock repurchases	$ 3,007	$ 2.840	$ 5,839	$ 4.536

There were 19.3 million warrants outstanding at June 30, 2017 compared with 24.9 million outstanding at December 31, 2016.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-l of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-l repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity - for example, during internal trading blackout periods. All purchases under a Rule 10b5-l plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-l programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on page 22 of JPMorgan Chase's 2016 Form 10-K.

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Other capital requirements

TLAC

On December 15, 2016, the Federal Reserve issued its final Total Loss Absorbing Capacity ("TLAC") rule which requires the top-tier holding companies of eight U.S. global systemically important bank holding companies, including the Firm, among other things, to maintain minimum levels of external TLAC and external long-term debt that satisfies certain eligibility criteria ("eligible LTD") by January 1, 2019. The minimum external TLAC requirement is the greater of (A) 18% of the financial institution's RWA plus applicable buffers, including its GSIB surcharge as calculated under Method 1 and (B) 7.5% of its total leverage exposure plus a buffer equal to 2.0%. The required minimum level of eligible long-term debt is equal to the greater of (A) 6% of the financial institution's RWA, plus its U.S. Method 2 GSIB surcharge and (B) 4.5% of the Firm's total leverage exposure. The final rule permanently grandfathered all long-term debt issued before December 31, 2016, to the extent these securities would be ineligible only due to containing impermissible acceleration rights or being governed by foreign law. While the Firm may have to raise long-term debt to be in full compliance with the rule, management estimates that the remaining net amount to be raised is not material and the timing for raising such funds is manageable.

Broker-dealer regulatory capital

JPMorgan Securities

JPMorgan Chase's principal U.S. broker-dealer subsidiary is JPMorgan Securities. JPMorgan Securities is subject to Rule 15c3-l under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities is also registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities has elected to compute its minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule.

In accordance with the market and credit risk standards of Appendix E of the Net Capital Rule, JPMorgan Securities is eligible to use the alternative method of computing net capital if, in addition to meeting its minimum net capital requirement, it maintains tentative net capital of at least $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion. As of June 30, 2017, JPMorgan Securities maintained tentative net capital in excess of the minimum and notification requirements.

The following table presents JPMorgan Securities' net capital information:

I'fln'billibns)■ y	M,"&..»·C?^y?',<;^AS^^':Mini^ro3
JPMorgan Chase's subsidiary:	
JPMorgan Securities	$ 13.9 $ 2.8

J.P. Morgan Securities pic

J.P. Morgan Securities pic is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities pic is jointly regulated by the U.K. Prudential Regulatory Authority ("PRA") and the Financial Conduct Authority ("FCA"). J.P. Morgan Securities pic is subject to the European Union Capital Requirements Regulation and the U.K. PRA capital rules, each of which implemented Basel III and thereby subject J.P. Morgan Securities pic to its requirements.

The following table presents J.P.Morgan Securities pic's capital information:

yJuhe30; 2017	■"■""^'■i-	:'v;.v 7"	joti) capital[1]""^		
JPMorgan Chase, N.A.'s subsidiary:					
J.P. Morgan Securities pic	$ 37.2	13.6%	4.5%	16.8%	8.0%

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CREDIT RISK MANAGEMENT

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. For a further discussion of the Firm's Credit Risk Management framework and organization, and the identification, monitoring and management of credit risks, see Credit Risk Management on pages 86-107 of JPMorgan Chase's 2016 Annual Report.

In the following tables, total loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in the provision for credit losses and/or noninterest revenue); and certain loans accounted for at fair value. The following tables do not include certain loans the Firm accounts for at fair value and classifies as trading assets. For further information.regarding these loans, see Notes 2 and 3. For additional information on the Firm's loans, lending-related commitments and derivative receivables, including the Firm's accounting policies, see Notes 11,19, and 4, respectively.

For further information regarding the credit risk inherent in the Firm's cash placed with banks, see Wholesale credit exposure - industry exposures on pages 58-60; for information regarding the credit risk inherent in the Firm's investment securities portfolio, see Note 9 of this Form 10-Q, and Note 12 of JPMorgan Chase's 2016 Annual Report; and for information regarding the credit risk inherent in the securities financing portfolio, see Note 10 of this Form 10-Q, and Note 13 of JPMorgan Chase's 2016 Annual Report.

Jun 30; .. 2017
(In.millions)

$ 5,827 { 6.721 64 162

Loans retained Loans held-for-sale Loans at fair value
Dec'3I. : .2016 .
908,767 56,506
894,765 64.078

5,891 170
6,883 223

899,576 $ 889,907 7,212 2.628 1,979 2,230

Total loans
17.560

Derivative receivables
7.106

Receivables from customers and other

Total credit-related assets 984,804

NA NA

322 49

370 59

Assets acquired in loan satisfactions

Real estate owned NA
NA
371
NA
429

Other NA
Total assets acquired in loan satisfactions

984,804 976.403 6,432 7.535

Total assets

Lending-related commitments
Total credit portfolio
1.000,924 976.702 750 506

$ 1,985,728 S 1.953.105 $ 7,182 S 8.041
(21,723) $ (22.114) $

Credit derivatives used in credit portfolio management activities'" $
(18,552) (22,705)
;Three months ended June 30.

Liquid securities and other cash collateral held against derivatives
"2017
2017
2016
2016-

."six-month's . ended June 30.

Net charge-offs"" Average retained loans Loans
Loans - excluding residential real estate PCI loans

Net charge-off rates""

Loans

Loans - excluding PCI
(in millions,[1] fex'cept ratios)

$ 1,204 $ 1,181 $ 2,858 $ 2.291 892.840 855.622 889,229 846.036

0.56% 0.58

0.65% 0.67

0.54% 0.57

859,102 816,572 854,842 806,314

0.54% 0.56

a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures: these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 62 and Note 4.
b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
c) At June 30, 2017, and December 31, 2016, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $4.1 billion and $5.0 billion, respectively, that are 90 or more days past due: (2) student loans insured by U.S. government agencies under the FFELP of $24 million and $263 million, respectively, that are 90 or more days past due; and (3) real estate owned ("RE0") insured by U.S. government agencies of $105 million and $142 million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").
d) For the six months ended June 30, 2017, excluding net charge-offs of $467 million related to the student loan portfolio transfer, the net charge-off rate for Loans would have been 0.54% and for Loans - excluding PCI would have been 0.56%. For additional information refer to CCB segment results on page 21.

CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, and business banking loans, and associated lending-related commitments. The Firm's focus is on serving primarily the prime segment of the

consumer credit market. For further
information on consumer loans, see Note 11 of this Form 10-Q and Consumer Credit Portfolio on pages 89-95 and Note 14 of JPMorgan Chase's 2016 Annual Report. For further information on lending-related commitments, see Note 19 of this Form 10-Q.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AWM, and prime mortgage loans held by Corporate.

Consumer credit portfolio

Three months e'ndedtfune 30:

Nonaccrual - Joans™' .

Average'annual net" .■ • i

;Net charge-offs/ charge-off/' 'Averageannual.net <http://'Averageannual.net>) (recoveries)"^ . (recovery) rate[1] ™'"" ..,Netcharge-offs"j,""" charge-of(:rate[wl°]!."" '■

Jun 30, ; 2017

Dec.31. 2016

lun-30, Dec 31, ' 2017 2016

Consumer, excluding credit card

Loans, excluding PCI loans and loans held-for-sale

Home equity

Residential mortgage[1*1]

Auto[11"10]

Consumer & Business Banking[''1"0""]

Student[1""]

$ 36,000 $ 39.063 205,380 192,486 65,627 65.814

25,044

24.307 7,057

$ 1,645 $ 1.845 2,089 2.256 158 214

301

287 165

9 $ 36 (3) 3 48 46

56

53 29

0.10% (0.01) 0.29

0.91

0.34% $

0.01

0.29

0.92 1.50

58 $

113 498

95 4

113

109 66
0.40

0.93 NM

0.31% 0.43%

0.36

0.95., 1.68

Total loans, excluding PCI loans and loans held-for-sale

Loans - PCI Home equity Prime mortgage Subpnme mortgage Option arms'"

11,838 7,023 2,771
11,432

328.727

12,902 7.602 2.941
12,234

NA NA NA NA

4.193 4.767

NA NA NA NA

NA NA NA NA

167

NA NA NA NA

NA NA NA NA

0.21

NA NA NA NA

NA NA NA NA

387

NA NA NA NA

NA NA NA NA

NA NA NA NA

Total loans - PCI

Total loans - retained

Loans held-for-sale

365,371

364.644

Total consumer, excluding credit card loans

Lending-related commitments'" 58,162 54,797

Receivables from customers"" 136 120

Total consumer exposure, excluding credit card

Credit card

Loans retained"1 Loans held-for-sale

423,669

140,035 106

141,711 105

140,141

Total credit card loans

Lending-related commitments"1 576,264 553.891

Total credit card exposure 716,405 695,707

$ 4,226	$ 4,820	$1,147	$ 1,027	0.92%	0.85%	$ 2,828	$ 2,077	1.14% 0.87%
$ 4,226	$ 4,820	$1,147	$1,027	0.99%	0.92%	$ 2,828	$ 2,077	1.22% 0.95%

a) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.
b) At June 30. 2017. and December 31. 2016. excluded operating lease assets of $15.2 billion and $13.2 billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets.
c) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses, these loans are managed by CCB, and therefore, for consistency in presentation, are included within the consumer portfolio.
d) Predominantly includes Business Banking loans.
e) For the six months ended June 30. 2017, excluding net charge-offs of $467 million related to the student loan portfolio transfer, the net charge-off rate for Total consumer, excluding credit card and PCI loans and loans held-for-sale would have been 0.20%; Total consumer- retained excluding credit card loans would have been 0.18%: Total consumer credit portfolio would have been 0.95%; and Total consumer credit portfolio, excluding PCI loans would have been 1.02%. For additional information refer to CCB segment results on page 21.
f) At June 30. 2017, and December 31, 2016, approximately 68% and 66%, respectively, of the PCI option adjustable rate mortgage ("ARM") portfolio has been modified into fixed-rate, fully amortizing loans.
g) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice.

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(h) Receivables from customers represent margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no
allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.
(i) Includes billed interest and fees net of an allowance for uncollectible interest and fees.
(j) includes residential mortgage loans held-for-sale at both June 30, 2017 and December 31. 2016. Also includes student loans held-for-sale at June 30. 2017.
(k) At June 30. 2017. and December 31, 2016. nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of $4.1 billion and $5.0 billion, respectively; and (2) student loans insured by U.S. government agencies under the FFELP of 424 million and $263 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance issued by the FFIEC
(I) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
(m) Net charge-offs and the net charge-off rates excluded write-offs in the PCI portfolio of $22 million and $41 million for the three months ended June 30, 2017 and 2016, respectively, and $46 million and $88 million for the six months ended June 30. 2017 and 2016. respectively. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 63-65 for further details.
(n) Average consumer loans held-for-sale were $4.9 billion and $354 million for the three months ended June 30. 2017 and 2016, respectively, and $2.6 billion and $389 million for the six months ended June 30. 2017 and 2016, respectively. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances were relatively flat compared to balances at December 31, 2016 as originations of high-quality prime mortgage loans that have been retained on the balance sheet were offset by the sale of the student loan portfolio as well as paydowns and the charge-off or liquidation of delinquent loans. The credit environment remained favorable as a result of low unemployment levels and increases in home prices.

PCI loans are excluded from the following discussions of individual loan products and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 11 of this Form 10-Q.

Home equity: The home equity portfolio declined from December 31, 2016 primarily reflecting loan paydowns and charge-offs. Both early-stage and late-stage delinquencies showed improvement from December 31, 2016. Nonaccrual loans decreased from December 31, 2016 primarily as a result of loss mitigation activities. Net charge-offs for the three and six months ended June 30, 2017 declined when compared with the same periods of the prior year, partially as a result of lower loan balances.

At June 30, 2017, approximately 90% of the Firm's home equity portfolio consists of home equity lines of credit ("HELOCs") and the remainder consists of home equity loans ("HELOANs"). For further information on the Firm's home equity portfolio, see Note 11 of this Form 10-Q and Consumer Credit Portfolio on pages 89-95 of JPMorgan Chase's 2016 Annual Report.

The carrying value of HELOCs outstanding was $32 billion at June 30, 2017. Of such amounts, $13 billion have recast from interest-only to fully amortizing payments or have been modified. Of the remaining $19 billion, approximately:

- $13 billion are scheduled to recast from interest-only to fully amortizing payments in future periods, and
- $6 billion are interest-only balloon HELOCs, which primarily mature after 2030.

The following chart illustrates the payment recast composition of the approximately $19 billion of HELOCs scheduled to recast in the future, based upon their current contractual terms.

HELOCs scheduled to recast (at June 30, 2017)

Balloon primarily beyond 2030-^ 32% \
Recast 2019 and beyond-42%

Recast in remainder of 2017 16%

. Recast in 2018
10%

The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) resulting from the increase in the monthly payment expected to occur at the payment recast date, along with the corresponding estimated probability of default ("PD") and loss severity assumptions. As part of its allowance estimate, the Firm also expects, based on observed activity in recent years, that approximately 25% of the carrying value of HELOCs scheduled to recast will voluntarily pre-pay prior to or after the recast. The HELOCs that have previously recast to fully amortizing payments generally have higher delinquency rates than the HELOCs within the revolving period, primarily as a result of the payment shock at the time of recast. Certain other factors, such as future developments in both unemployment rates and home prices, could also have a significant impact on the performance of these loans.

The Firm' manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile. The Firm will continue to evaluate both the near-term and longer-term recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

Junior lien loans where the borrower has a senior lien loan that is either delinquent or has been modified are considered high-risk seconds. Such loans are considered to pose a higher risk of default than junior lien loans for which the senior lien is neither delinquent nor modified. At June 30, 2017, the Firm estimated that the carrying value of its home equity portfolio contained approximately $0.9 billion of current junior lien loans that were considered high risk seconds, compared with $1.1 billion at December 31, 2016. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of the senior lien). The Firm considers the increased PD associated with these high-risk seconds in estimating the allowance for loan losses and classifies those loans that are subordinated to a first lien loan that is more than 90 days delinquent as nonaccrual loans. The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior liens into and out of the 30+ day delinquency bucket. The Firm continues to monitor the risks associated with these loans. For further information, see Note 11.

Residential mortgage: The residential mortgage portfolio predominantly consists of high-quality prime mortgage loans, with a small component (approximately 1%) of the residential mortgage portfolio in subprime mortgage loans. These subprime mortgage loans continue to run-off and are performing in line with expectations. The residential mortgage portfolio, including loans held-for-sale, increased from December 31, 2016 due to retained originations of primarily high-quality fixed rate prime mortgage loans partially offset by paydowns and the charge-off or liquidation of delinquent loans. Both early-stage and late-stage delinquencies showed improvement from December 31, 2016. Nonaccrual loans decreased from December 31, 2016 primarily as a result of loss mitigation activities. Net charge-offs for the three and six months ended June 30, 2017 remain low, reflecting continued improvement in home prices and delinquencies.

At June 30, 2017, and December 31, 2016, the Firm's residential mortgage portfolio, including loans held-for-sale, included $8.7 billion and $9.5 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $6.0 billion and $7.0 billion, respectively, were 30 days or more past due (of these past due loans, $4.1 billion and $5.0 billion, respectively, were 90 days or more past due). The Firm monitors its exposure to certain potential unrecoverable claim payments related to government-insured loans and considers this exposure in estimating the allowance for loan losses.

At June 30, 2017, and December 31, 2016, the Firm's residential mortgage portfolio included $19.7 billion and $19.1 billion, respectively, of interest-only loans. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. To date, losses on this portfolio generally have been consistent with the broader residential mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Auto: Auto loans were relatively flat compared with December 31, 2016, as paydowns and the charge-off or liquidation of delinquent loans were offset by new originations. Nonaccrual loans decreased compared with December 31, 2016. Net charge-offs for the three and six months ended June 30, 2017 increased compared with the same period in the prior year, as a result of a moderate increase in loss severity. The auto portfolio predominantly consists of prime-quality loans.

Consumer & Business Banking: Consumer & Business Banking loans increased compared with December 31, 2016, as growth in loan originations were partially offset by paydowns and the charge-off or liquidation of delinquent loans. Nonaccrual loans increased slightly compared with December 31, 2016. Net charge-offs for the three and six months ended June 30, 2017 increased compared to the prior year.

Student: The Firm transferred the student loan portfolio to held-for-sale in the first quarter of 2017 and sold substantially all of the portfolio in the second quarter of 2017. Net charge-offs for the six months ended June 30, 2017 increased as a result of the write-down of the portfolio at the time of the transfer.

Purchased credit-impaired loans: PCI loans decreased as the portfolio continues to run off. As of June 30, 2017, approximately 11% of the option ARM PCI loans were delinquent and approximately 68% of the portfolio had been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

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The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Lifetime loss. estimates[IJ,]

Summary of PCI loans lifetime principal loss estimates

Jun 30, 2017
Jun 30, 20i7
Dec31.' 2016

Dec.3i,
.2016

Life-to-date liquidation j losses!" •. 'i

12.8 3.7 3.1 9.7

Home equity

Prime mortgage

Subprime mortgage

Option ARMs

14.0 3.9 3.2 9.9

14.4 4.0 3.2

10.0

;(in billions)
Total
29.3

12.8 3.8 3.1 9.7
$ 31.0 $ 31.6 $ 29.4

a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $962 million and $1.1 billion at June 30, 2017. and December 31, 2016, respectively.
b) Life-to-date liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification.

Current estimated loan-to-value ratio of residential real estate loans

The current estimated average loan-to-value ("LTV") ratio for residential real estate loans retained, excluding mortgage loans guaranteed and/or insured by U.S. government agencies and PCI loans, was 57% at June 30, 2017, compared with 58% at December 31, 2016. The current estimated average LTV ratio for residential real estate PCI loans, based on the unpaid principal balances, was 61% at June 30, 2017, compared with 64% at December 31, 2016.

Average LTV ratios have declined consistent with recent improvements in home prices, customer pay downs, and charge-offs or liquidations of higher LTV loans. For further information on current estimated LTVs on residential real estate loans, see Note ll.

Geographic composition of residential real estate loans

For information on the geographic composition of the Firm's residential real estate loans, see Note 11.

Loan modification activities - residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. The performance of modifications completed under both the U.S. Government's Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP), as measured through cumulative redefault rates, was not materially different from December 31, 2016. For further information on the Firm's cumulative redefault rates see Consumer Credit Portfolio on pages 89-95 of JPMorgan Chase's 2016 Annual Report. Certain loans that were modified under HAMP and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans generally began to increase commencing in 2014 by 1% per year, and will continue to do so, until the rate reaches a specified cap. The cap on these loans is typically at a prevailing market interest rate for a fixed-rate mortgage loan as of the modification date. At June 30, 2017, the carrying value of non-PCI loans and the unpaid principal balance of PCI loans modified in step-rate modifications, which have not yet met their specified caps, were $3 billion and $8 billion, respectively. The Firm continues to monitor this risk exposure and the impact of these potential interest rate increases is considered in the Firm's allowance for loan losses.

The following table presents information as of June 30, 2017, and December 31, 2016, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. For further information on modifications for the three and six months ended June 30, 2017 and 2016, see Note 11.

Modified residential real estate loans

l;.T , ^p i ^ ' ^

- accrual ", accrualM Retained"retained:.Retained .j retained1;!!

Modified residential real estate loans, excluding PCI loans(a),(b)

Home equity

Residential mortgage

".» Joans ■loans?' -"i

Total modified residential real estate loans, excluding PCI loans

$ 2,162 $ 1,056 $ 2,264 $ 1.116 5,804 1,684 6,032 1,755

Modified PCI loans(c)

Home equity

Prime mortgage

Subprime mortgage

Option ARMS
NA NA NA NA
$ 2,369 4,767 2,815 8,770

$ 7,966 $ 2,740 $ 8,296 $ 2,871

NA$ 2,447
NA5,052
NA2,951
NA
NA $19,745
NA9,295
Total modified PCI loans $ 18,721

a) Amounts represent the carrying value of modified residential real estate loans.
b) At June 30, 2017, and December 31, 2016, $3.9 billion and $3.4 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e.. Federal Housing Administration ("FHA"), U.S. Department of Veterans Affairs ("VA"), Rural Housing Service of the U.S. Department of Agriculture ("RHS")) are not included in the table above, when such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans m securitization transactions with Ginnie Mae, see Note 13.
c) Amounts represent the unpaid principal balance of modified PCI loans.
d) At both June 30, 2017, and December 31, 2016. nonaccrual loans included $2.3 billion of troubled debt restructurings ("TDRs") for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 11.

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Nonperforming assets

The following table presents information as of June 30, 2017, and December 31, 2016, about consumer, excluding credit card, nonperforming assets.

June 30, 2017

Nonperforming assets'[31]
(in millions)

December 31.1 '• ; .2016 j

4,154 666
3,763 463

Nonaccrual loans""
4,226
4,820

Residential real estate"[1] Other consumer"'
Total nonaccrual loans

249 47

292 57
296
349

Assets acquired in loan satisfactions Real estate owned Other
4,522 $
5.169
Total assets acquired in loan satisfactions
Total nonperforming assets

Nonaccrual loans in the residential real estate portfolio decreased to $3.8 billion at June 30, 2017 from $4.2 billion at December 31, 2016, of which 27% and 29%, respectively, were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 43% to the estimated net realizable value of the collateral at both June 30, 2017, and December 31, 2016.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 11.

Nonaccrual loans: The following table presents changes in consumer, excluding credit card, nonaccrual loans for the six months ended June 30, 2017 and 2016.

Nonaccrual loan activity

a) At June 30, 2017, and December 31, 2016. nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $4.1 billion and $5.0 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $24 million and $263 million, respectively, that are 90 or more days past due; and (3) REO insured by U.S. government agencies of $105 million and $142 million, respectively. These amounts have been excluded based upon the government guarantee.
b) Excludes PCI loans-which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate

expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. The Firm is recognizing interest income on each pool of loans as they are all performing.

c) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

"Six months ended J'une 30;,(in.milliohs)v:

Beginning balance Additions

Reductions: Principal payments and other"' Charge-offs

Returned to performing status Foreclosures and other liquidations

Total reductions

Net changes

Ending balance

(a) Other reductions includes loan sales.

2017

5,413 1,802

20163

730 354 853 193

4,820 1,647

2,130

888 372 750 231

(328)

2,241

(594)

$ 4,226 $ 5.085

Credit card

Total credit card loans decreased from December 31, 2016 due to seasonality. The June 30, 2017 30+ day delinquency rate decreased to 1.59% from 1.61% at December 31, 2016, and remains near record lows. For the three months 'ended June 30, 2017 and 2016, the net charge-off rates were 3.01% and 2.70%, respectively. For the six months ended June 30, 2017 and 2016, the net charge-off rates were 2.98% and 2.66%, respectively. The credit card portfolio continues to reflect a largely well-seasoned portfolio that has good U.S. geographic diversification. New originations continue to grow as a percentage of the total portfolio; these originations have generated higher loss rates than the more seasoned portion of the portfolio given the higher mix of near-prime accounts being originated, in line with the Firm's credit parameters. These near-prime accounts, once seasoned, have net revenue rates and returns on equity that are higher than the portfolio average. For information on the geographic and FICO composition of the Firm's credit card loans, see Note 11.

Modifications of credit card loans

At both June 30, 2017 and December 31, 2016, the Firm had $1.2 billion of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged-off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income.

For additional information about loan modification programs to borrowers, see Note 11.

WHOLESALE CREDIT PORTFOLIO

The Firm's wholesale businesses are exposed to credit risk through underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit portfolio continued to be generally stable for the six months ended June 30, 2017, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. See industry discussion on pages 58-60 for further information. Growth in retained loans was predominantly driven by CB. Discipline in underwriting across all areas of lending continues to remain a key point of focus. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure inclusive of collateral where applicable, as well as reviews of industry, product and client concentrations.

In the following tables, the Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM andCorporate, and excludes all exposure managed by CCB.

Wholesale credit portfolio

	Credit exposure		Nonperforming[c]	
(in millions)	Jun 30, 2017	Dec 31, 2016	Jun 30, 2017	Dec 31, 2016
Loans retained	$ 394,426	$ 383,790	$ 1,634	$ 1,954
Loans held-for-sale	6,850	2,285	31	109
Loans affair value	1,979	2.230		
Loans	403,255	388.305	1,665	2,063
Derivative receivables	56,506	64,078	170	223
Receivables from customers and other[a]	19,395	17,440	-	
Total wholesale credit-related assets	479,156	469,823	1,835	2,286
Lending-related commitments	366,498	368,014	750	506
Total wholesale credit exposure	$ 845,654	$ 837.837	$ 2,585	$ 2,792
Credit derivatives used in credit portfolio management activities[b]	$ (21,723)	$ (22,114)	$ -	$
Liquid securities and other cash collateral held against derivatives	(18,552)	(22,705)	NA	NA

a) Receivables from customers and other include $19.4 billion and $17.3 billion of margin loans at June 30. 2017, and December 31, 2016, respectively, to prime brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.
b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 62, and Note 4.
c) Excludes assets acquired in loan satisfactions.

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The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of June 30, 2017, and December 31, 2016. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings defined by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 14 of JPMorgan Chase's 2016 Annual Report.

Wholesale credit exposure - maturity and ratings profile

Maturity profile'"

; June 30.2017 • • ((in millions, except,ratios)

Loans retained Derivative receivables

Less: Liquid securities and other cash collateral held against derivatives

Total derivative receivables, net of all collateral

Lending-related commitments

Subtotal

Loans held-for-sale and loans at fair value"[1] Receivables from customers and other
Due after 5
•.•' .'years

Due after l '.'.year ' Due in 1 through.5. year or less years.

8,820 88,305

20,762 11,726

$ 114,667 $ 177,751 $ 102,008 $
134,496

8,372 266,467

394,426 56,506

(18,552) 37,954 366,498

798,878 8,829 19,395

Investments-grade "

AAA/Aaa to BBBVBaa3

302,686

30,010 269,686

602,382

Noninvestment-, . ,'.." . grade . , •■■ ; '

' ,:BB*/Bai-.a." ■;.' ■■'•

91,740 $

7,944 96.812

394,426 56,506

(18,552)

37,954 366,498
196,496

798,878 8,829 19,395

Total.W.j of IG •

79 74
Total exposure - net of liquid securities and other cash collateral held against derivatives

$ (1,134) $ (16,247) $ (4.342) $ (21,723) $

Maturity profile"!.,..'.

>December,3j, 2016 ' ; ■. f(in-mUttons. except-ratios) .

Loans retained Derivative receivables
Less: Liquid securities and other cash collateral held against derivatives

Total derivative receivables, net of all collateral

Lending-related commitments

Subtotal

Loans held-for-sale and loans at fair value"1 Receivables from customers and other

;. * ' 'Oneafter!
',,"-'.':". year,,', ■.,•'■' /,","•'-.'„

Due in! ,,'through 5 ',■Our after 5'.!

year or.I.ess 'Vfc years ' if years J-'

14.019 88,399

18.844 7,790

$ 117.238 $ 167,235 $ 99,317 $
219,656
125.951

8,510 271,825
447,570

383,790 64.078

(22,705) 41.373 368,014
793,177 4.515 17,440

Investment- ; 'grade ,

AAA/Aaa to BB8-/Baa3 ;..

289.923

33.081
269.820
592,824

:.iTotal%!i ' Of IG

■ Nohinyestmeht-.; ■ ,V ' ?'V.': (ijM*
.:BB+/Bara::.
• below .V 'jjfc'ijTotal;
93.867 $

383.790 64.078

8,292 98.194
80

73

(22,705)

41,373 368,014
200.353

793,177 4.515 17,440

Total exposure - net of liquid securities and other cash collateral held against derivatives

$ (1.354) $ (16,537) $ (4.223) $ (22,114) $

a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection, including credit derivatives used in credit portfolio management activities, are executed with investment-grade counterparties.
d) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on the remaining contractual maturity. Derivative contracts that are in a receivable position at June 30, 2017, may become payable prior to maturity based on their cash flow profile or changes in market conditions.

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wholesale credit exposure - industry exposures

The Firm focuses on the management and diversification of its industry exposures, and pays particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was $16.5 billion at June 30, 2017, compared with $19.8 billion at December 31, 2016, with the decrease largely driven by Oil & Gas.

Effective in the first quarter of 2017, the Firm revised its methodology for the assignment of industry classifications, to better monitor and manage concentrations. This largely resulted in the re-assignment of holding companies from All other to the industry of risk category based on the primary business activity of the holding company's underlying companies or enterprises. In the tables and industry discussions below, the prior period amounts have been revised to conform with the current period presentation.

Below are summaries of the Firm's exposures as of June 30,2017, and December 31,2016. For additional information on industry concentrations, see Note 5 ofJPMorgan Chase's 2016 Annual Report.

Wholesale credit exposure - industries[00]

Selected.metrics

; As of or for the six months elided June 30,2017 ■ (in millions) '. ■,

Real Estate
Consumer & Retail
Technology. Media & Telecommunications
Industrials
Healthcare
Banks & Finance Cos
Oil & Gas
Asset Managers
Utilities
State & Municipal Govt"" Central Govt Transportation Automotive Chemicals & Plastics Metals & Mining insurance
Financial Markets infrastructure Securities Firms All other[1]"
Credit'. exposure"

Investment;. •grade'

58.668 57,316 48,697 46,489 38,832 32,248 30,605 27,590 18,760 17,677 15,895 15.494 13.455 11,808 7,872 5,200 142,785

$ 137,743 $ 110.956 90,296 61,168

36,000 36.582 37,481 33,160 18,967 27,456 24,508 26,990 18,411 11,287 9,309 11,306 6,240 9,684 6,862 2,701 130,104

30 days ■ . . ',] . ■ Liquid securities;
or more ' ,'and other cash..';
past due. ' ■ . ." - . collateral held |

(2) $ 13

(18) 6

(1) (1) 37

140 $ 155

7 98

7 16

4 66

5 2 3 1 2 1 8

(6) (22)

(86) (38) (260) (4,470) (37) (4,853) (106) (97) (3,599) (170) (9) (5) (14) (2,064) (358) (912) (1.446)

■:. and v.,. Net ... Credit - against 'accruingcharge-offs/ derivative derivative v.; .:■ loans- (recoveries) • hedges'" receivables-

(40) $ (407)

(445) (379) (245) (1,359) (1,127)

(266) (130) (10,355)

(71) (362)

(14)

(30) (374) (232)

936

(11)

(274) (5,627)

$ 181,787 $ 13,917 $

Loans held-for-sale and loans at fair value

Receivables from customers and other

Total™

8,829

19,395 $ 845,654

(continued from previous page)

■ Selected metrics-

j As of or for the^year, ended

?December,3i:2qib

'(in millions) ,'•... ■■'■' .-, ';■

Real Estate

Consumers Retail

Technology. Media & Telecommunications

Industrials

Healthcare

Banks & Finance Cos

Oil & Gas

Asset Managers

Utilities

State & Municipal Govt"" Central Govt Transportation Automotive Chemicals & Plastics Metals & Mining insurance

Financial Markets infrastructure Securities Firms All other[11']

Subtotal

937 $ 1,571

1.559 1.033

882

438 8.069 1

424

6 9

444

201 156 1.133

28,281 28.255

21.751 17,854 9.279 12.560 12.274 4.006 4.959 624 276 6.421 7,299 4,452 6.744 2,459 752 2.399 11.988

Investment.. • y. - , •' i;; i' - grade; _ /_ i NoRCrfticaed-

39.998 36,710 39,244 35.385 18.629 29,194 24.203 27.603 20.123 12,178

9,235 10.405

5.523 10,918

7,980

1,812 124,661

$ 134.287 $ 104.869 84.804 54,730

63.324 55.733 49,445 48.393 40.367 33,201 29,672 28.263 20,408 19.096 16,736 15.043 13.419 13,510 8,732 4,211 137.238
303

$ 815.882 $ 613,400 $ 182.633 $ 17,166 $

Loans held-for-sale and loans at fair value 4,515

Receivables from customers and other 17.440

$ 837,837

(a) The industry rankings presented in the table as of December 31, 2016. are based on the industry rankings of the corresponding exposures at June 30, 2017. not actual rankings of such exposures at December 31. 2016.
In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at June 30. 2017. and December 31, 2016. noted above, the Firm held: $8.8 billion and $9.1 billion, respectively, of trading securities: $32.5 billion and $31.6 billion, respectively, of AFS securities; and $14.4 billion and $14.5 billion, respectively."of held-to-maturity ("HTM") securities, issued by U.S. state and municipal governments. For further information, see Note 2 and Note 9.

c) All other includes: individuals: SPEs: and private education and civic organizations; representing approximately 59%, 37%, and 4%. respectively, at both June 30,2017 and December 31, 2016.

d) Excludes cash placed with banks of $440.8 billion and $380.2 billion, at lune 30. 2017. and December 31. 2016, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks. ^

e) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.

f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

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Presented below is a discussion of certain industries to which the Firm has significant exposures and/or which present actual or potential credit concerns.

Real Estate

Exposure to the Real Estate industry increased $3.5 billion during the six months ended June 30, 2017, to $137.7 billion, predominantly driven by multifamily lending within CB. Of the $137.7 billion as of June 30, 2017, 81% was investment-grade, and 84% was secured. As of June 30, 2017, $84.2 billion of the $137.7 billion was multifamily, largely in California; of the $84.2 billion, 85% was investment-grade and 96% was secured. Other Real Estate exposure was $53.5 billion, of which 73% was investment-grade, and 64% was secured; unsecured exposure was 85% investment-grade. For further information on commercial real estate loans, see Note 11.

Oil & Gas and Natural Gas Pipelines

The following table presents Oil & Gas and Natural Gas Pipeline exposures as of June 30, 2017, and December 31, 2016.

"ᵀ/' " ■■ ■ .'/:"."■]'.',": ■ "* 'y- ■"" ■/; /.,/ ' /. . . june36,2oi7 v V,'^^'^■"'l'■"■-?.'-ᵀZS					
tCin inijHoj%"ea%itTatips).°",°...:•	V. ' .'••/.' •" Loans and Lending-related. ;' . toimmitmente. .'^/t	Derivative . Receivables.	,/. ' ' "■ Credit .- / exposure v	. Investment- v. tgrade;/	% . " ■. ■.;/,.'> "y/V J;fi>_%brawh|?';j . '7i|
Exploration S Production ("E&P") and Oilfield Services[131]	$ 20,416	$ 417	$ 20,833	30% 31%	
Other Oil & Gas'[1]"	17,722	277	17,999	71	31
Total Oil & Gas	38,138	694	38,832	49 31	
Natural Gas Pipelines[10]	4,740	60	4,800	60	16
Total Oil & Gas and Natural Gas Pipelines	$ 42,878	$ 754	$ 43,632	50	30

'JiriifHljrarjk;«cept ratios)/;

E&P and Oilfield Services"" Other Oil S Gas""

Total Oil & Gas

Natural Gas Pipelines'[0]

.:Loans:and jLending-related: , iCommitments■:•

20,971 17,518

38,489 4.253

December 31.2016 y ^. ,-„

*• Credit <■: /exposure -'J^*

22.227 18,140

40,367 4,359

% v.

jjnvetment-. , igraiie; ^

27% 70

46 66

/Sfeprawn??]^

35% 31

33 30

Total Oil & Gas and Natural Gas Pipelines

a) Noninvestment-grade exposure to E&P and Oilfield Services is largely secured.
b) Other Oil S Gas includes Integrated Oil & Gas companies. Midstream/Oil Pipeline companies and refineries.
c) Natural Gas Pipelines is reported within the Utilities industry.
d) Represents drawn exposure as a percentage of credit exposure.

Exposure to the Oil & Gas and Natural Gas Pipelines portfolios was approximately 5.2% and 5.3% of the Firm's total wholesale exposure as of June 30, 2017 and December 31, 2016, respectively. Exposure to these industries decreased by $1.1 billion during the six months ended June 30, 2017 to $43.6 billion; of the $43.6 billion, approximately $12.9 billion was drawn as of June 30, 2017. As of June 30, 2017, approximately $21.9 billion of the exposure was investment grade, of which $4.6 billion was drawn, and approximately $21.8 billion of the exposure was noninvestment-grade, of which $8.3 billion was drawn; 16% of the exposure to the Oil & Gas and Natural Gas Pipelines industries was criticized. Secured lending, of which approximately half is reserve-based lending to the Exploration & Production sub-sector of the Oil & Gas industry, was $14.7 billion as of June 30, 2017; 42% of the secured lending exposure was drawn. Exposure to commercial real estate, which is reported within the Real Estate industry, in certain areas of Texas, California and Colorado that are deemed sensitive to the Oil & Gas industry, was approximately $4.5 billion as of June 30, 2017. While the overall trends and sentiment have been stabilizing, the Firm continues to actively monitor and manage its exposure to these portfolios.

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Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators and sales of loans, see Note 11.

The following table presents the change in the nonaccrual loan portfolio for the six months ended June 30, 2017 and 2016.

Wholesale nonaccrual loan activity'3'

itinimillibris),^

ifSix months ended June 30,'

Beginning balance Additions

1,016 1.902

, 2017 . , . 2016;,

Reductions: Paydowns and other Gross charge-offs Returned to performing status Sales

419 226 149 24

2,063 $ 747

Total reductions

818

666 93 183 203

Net changes

(398)

1,145

Ending balance

1,084

$ 1,665 $ 2,100

(a) Loans are placed on nonaccrual status when management believes full payment of principal or interest is not expected, regardless of delinquency status, or when principal or interest have been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the three and six months ended June 30, 2017 and 2016. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

:" : - . : ' Three months ended (in miilioni, ■■ >■ -June3°-:. "

Wholesale net charge-offs/(recoveries)

: Six months ended' June 30;%

.:2017,.V=4 2016.

Loans -reported

Average ' loans retained $ 392,257 $ 369.706 $ 387,339 $ 365,006

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn upon or a default occurring. In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's expected future credit exposure or funding requirements. For further information on wholesale lending-related commitments, see Note 19.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable clients to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit and other market risk exposure. For further discussion of derivative contracts, see Note 4.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

June 30;

't ^Derivative! feSimii^^f'. fl

■■■i.>-:-,V

■ December 3i;'.i

26,912 1,014

16,662 6,273 5,645

28.302 1.294

23.271 4,939 6,272
^inlmillibhs) ;^ -'v.

Interest rate Credit derivatives Foreign exchange Equity Commodity

Total, net of cash collateral 56,506 64,078

Liquid securities and other cash collateral held against derivative
37,954 $
41,373
receivables'" (18,552) (22,705)
Total, net of collateral

Gross charge-offs

Gross recoveries

73 (16)

159 (5)

99 (69)

228 (14)

(a) Includes collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Net charge-offs/
(recoveries)

Net charge-off/
(recovery) rate

61

The fair value of derivative receivables reported on the Consolidated balance sheets were $56.5 billion and $64.1 billion at June 30, 2017, and December 31, 2016, respectively. These amounts represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other group of seven nations ("G7") government bonds) and other cash collateral held by the Firm aggregating $18.6 billion and $22.7 billion at June 30, 2017, and December 31, 2016, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor. The decrease in derivative receivables at June 30, 2017 from December 31, 2016, is predominantly related to client-driven market-making activities in CIB Markets, reflecting lower foreign exchange and interest rate derivative receivables, driven by maturities and market movements.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily cash, G7 government securities, other liquid government-agency and guaranteed securities, and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor.

The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 4.

The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of all collateral, at the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Ratings profile of derivative receivables

•*\ J&rember^

. Rating equivalent . y V/: •^nIrhi1li4^:exc^.ratjos)'j^!?.

AAA/Aaa to AA-/Aa3 A+/A1 to A-/A3 BBB+/Baal to BBB-/Baa3 BB+/Bal to B-/B3 CCC+/Caal and below Total

11,449 8,505

13,127 7,308 984

9,472 8,252 12,286 7,295 649

28% 20 32 18 2

vie '?]* *"'.!!. fi"^v"Ex[Msu're'neVof;.. %^of exposWe :.p^bam,aetif-.: %of exposure;^ '*t':2hL&iVi- L?.'..:ilSPSaS*?'. a Ji^^i^^^v^it.ebjlateral :^'net^Wci^a|era!^

37,954

41,373

100%

25% $ 22 32 19 2

100% $

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements - excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity - was 91% and 90% at June 30, 2017 and December 31, 2016, respectively.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user, to manage the Firm's own credit risk associated with various exposures.

Credit portfolio management activities Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below.

Credit derivatives used in credit portfolio management activities

S^t'^-v'-'" * <%^^"'"":fi"PripiionaJramoumof jjrotecttoni^

• . * - f "* •pureHased'aridisold!3'i

{"■,, ■■- '• >.f, June 3dV? '4DKetnber^i^

'.(in millions) ,;	' jlUSZ'k'* ,^,,29¥? ..J-^.^M	
Credit derivatives used to manage:		
Loans and lending-related commitments	$ 1,681	$ 2.430
Derivative receivables	20,042	19.684
Credit derivatives used in credit portfolio management activities	$ 21,723	$ 22,114

(a) Amounts are presented net. considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

For further information on credit derivatives and derivatives used in credit portfolio management activities, see Credit derivatives in Note 4 of this Form 10-0, and Note 6 of JPMorgan Chase's 2016 Annual Report.

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ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 77-79 and Note 12 of this Form 10-Q, and Critical Accounting Estimates Used by the Firm on pages 132-134 and Note 15 ofJPMorgan Chase's 2016 Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm, and discussed with the Board of Directors' Risk Policy Committee ("DRPC") and Audit Committee. As of June 30, 2017, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

Overall, the consumer allowance for credit losses remained relatively unchanged from December 31, 2016. Changes to the allowance for credit losses included:

- the utilization of the allowance for loan losses in connection with the transfer of the student loan portfolio to held-for-sale;

- a reduction in the residential real estate portfolio, predominantly reflecting continued improvements in home prices and delinquencies;

predominantly offset by

- additions to the allowance for loan losses in the credit card, business banking and auto portfolios driven by loan growth as well as higher loss rates in credit card.

For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 50-55 and Note 11.

The wholesale allowance for credit losses decreased from December 31, 2016, primarily driven by a net reduction in the allowance related to the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios. For additional information on the wholesale portfolio, see Wholesale Credit Portfolio on pages 56-62 and Note 11.

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Summary of changes in the allowance for credit losses

iSix months/ended }Oivrnjllions, except

Allowance for loan losses

Beginning balance at January 1, Gross charge-offs Gross recoveries

5,198 1,105 (307)

4,034 2,223 (193)

4,544 $ 13,776 99 3,427 (69) (569)

5,806 688 (301)

3,434 1.874 (184)

4,315 $ 13,555 228 2,790 (14) (499)

Net charge-offsArecoveries) 1"

Write-offs of PCI loans[11]" Provision for loan losses Other

798

46 448

(2)

30

(337) 2

2,858

46 2,491

387

88 316 (1)

2,291

88 3,052 (1)

Ending balance at June 30,

Impairment methodology

Asset-specific"[1]' Formula-based PCI

361 3.323

525 4,372

370 4,014

1,251 10,322 2.654

365 2.627 2,654

$ 4,800 $ 4,384 $ 4,179 $ 13,363 $ 5.646 $ 3,684 $ 4,897 $ 14,227

345 $ 1,011 3,834 10,087 2,265

$ 4,800 $ 4,384 $ 4,179 $ 13,363 $ 5.646 $ 3,684 $ 4,897 $ 14,227

Allowance for lending-related commitments

Beginning balance at January 1, $ Provision for lending-related commitments Other

26 6

1,052 33

$ 1,078 39

$ 772 $ 786 174 174

Ending balance at June 30,

Impairment methodology

Asset-specific Formula-based

$ 1,085 $ 1,117 $ 14
14

$ 211 $ 211 874 906

$ 946 $ 960

$ 143 $ 143 803 817

Total allowance for lending-related commitments""

Total allowance for credit losses

Memo:

Retained loans, end of period Retained loans, average PCI loans, end of period Credit ratios

Allowance for loan losses to retained loans

Allowance for loan losses to retained nonaccrual loans'8'

Allowance for loan losses to retained nonaccrual loans excluding credit card

Net charge-off/(recovery) rates11'

Credit ratios, excluding residential real estate PCI loans

Allowance for loan losses to retained loans

Allowance for loan losses to retained nonaccrual loans'"

Allowance for loan losses to retained nonaccrual loans excluding credit card

Net charge-off/(recovery) rates'3'

$ 4,832 $ 4,384 $ 5,264 $ 14,480 $ 5,660 $ 3,684 $ 5,843 $ 15.187

364,316 33,064

387,339 889,229 3 33,067

$365,115 $ 140,035 $ 394,426 $899,576 $361,050 $131,507 $374,174 $866,731

137,574

1.49% 229

2.80% NM

1.31% 114

3.13% NM

1.06% 256

1.56% 111

353,259 127.771 365,006 846,036

38,360 - 4 38.364

1.31%

147 0.54

114 0.44

256 0.02

154 0.65

111 0.22

NM

2.98

NM

2.66

234

0.93 59

2.80 NM

1.40 161

0.76 60

3.13 NM
1.28
190

115 0.67%
1.06

256

256 0.02%

234 0.12

1.31
59 0.25"/
60 0.49%
NM
2.98%
NM
2.66%

234

234 0.12%

Note In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures.

a) For the six months ended June 30. 2017, excluding net charge-offs of $467 million related to the student loan portfolio transfer, the net charge-off rate for Consumer, excluding credit card would have been 0.18%; total Firm would have been 0.54%; Consumer, excluding credit card and PCI loans would have been 0.20%; and total Firm, excluding PCI would have been 0.56%. For additional information refer to CCB segment results on page 21.
b) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses tor a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation).
c) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR. The asset-specific credit card allowance for loan losses modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.
d) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.
e) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

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Provision for credit losses

For the three and six months ended June 30, 2017, the provision for credit losses was $1.2 billion and $2.5 billion, respectively, compared with $1.4 billion and $3.2 billion, respectively, in the prior year periods. The decrease in the provision for both periods was driven by a decline in the wholesale provision, partially offset by an increase in the consumer provision.

The wholesale provision for credit losses for the three months and six months ended June 30, 2017 was a benefit, primarily driven by reductions in the allowance for credit losses related to the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios. The prior year reflected increases due to the impact of downgrades in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios.

The increase in the consumer provision for the three months ended June 30, 2017 was primarily driven by $120 million of higher net charge-offs, predominantly in the credit card portfolio, and a $74 million higher addition to the allowance for credit losses when compared to the prior year.
Current quarter results included:

- a $350 million addition to the allowance for credit losses in the credit card portfolio, due to loan growth and higher loss rates, compared to a $250 million addition in the prior year;
- a $50 million addition to the allowance for credit losses in the business banking portfolio; and
- a $25 million addition to the allowance for credit losses in the auto portfolio, compared to a $50 million addition in the prior year;

the additions were partially offset by

- a $173 million reduction in the allowance for credit losses in the residential real estate portfolio, reflecting continued improvement in home prices and delinquencies, compared to a $97 million reduction in the prior year.

The increase in the consumer provision for the six months ended June 30, 2017 was primarily driven by $284 million of higher net charge-offs, predominantly in the credit card portfolio, $218 million related to the transfer of the student loan portfolio to held-for-sale, and a $76 million higher addition to the allowance for credit losses when compared to the prior year.

Current year results included:

- a $350 million addition to the allowance for credit losses in the credit card portfolio, due to loan growth and higher loss rates, compared to a $250 million addition in the prior year;
- a $50 million addition to the allowance for credit losses in the business banking portfolio; and
- a $25 million addition to the allowance for credit losses in the auto portfolio, compared to a $50 million addition in the prior year;

the additions were partially offset by

- a $170 million reduction in the allowance for credit losses in the residential real estate portfolio, reflecting continued improvement in home prices and delinquencies, compared to a $96 million reduction in the prior year.

■».. , ■:'. ,/■Prcryisipri forj loan, -. ■. Proyisidn fdf) lending- yTotal'p'rovisiori.fpr „ Rrbvisipn,fer;loin. f> Bfoyision>fbr

'itS-'J .'<■>'!'";. .^^..^:i>i.,*^^*'•'IV.*"••^^j¡£P^'^^·. 1 *'? .'?jj98^S/s:\^

(in millions)	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
2017					2016					
Consumer, excluding										
credit card					$ 6 $ 95	$ 6 $ -	$ 12 $ 95		$ 448 $ 316 6	
		$ -						$ 454		$ 316
Credit card 1,387	1.110		-			-	1,387	1,110	2,380	1,940
-					-2,380		1,940			
Total consumer 1,393	1,205		6			-	1,399	1,205	2,828	2,256
6					-2,834		2,256			
Wholesale (218)	251		34		(54)		(184)	197	(337)	796
33					174		(304) 970			
Total $ 1,175	$ 1,456	$	40	$	(54)	$ 1,215	$ 1,402	$ 2,491	$ 3,052	$
39					$ 174		$ 2,530	$ 3,226		

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COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country. The Firm has a country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring its direct country exposures. The Country Risk Management group is responsible for developing guidelines and policies for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country Risk Management periodically defines and runs stress scenarios for individual countries or groups of countries in response to specific or potential market events, sector performance concerns and geopolitical risks.

For a discussion of the Firm's Country Risk Management organization; identification and measurement; stress testing; monitoring and control; and reporting, see pages 108-109 ofJPMorgan Chase's 2016 Annual Report.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of June 30, 2017. The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

Top 20 country exposures (excluding the U.S.)

(in billions).

June 30. 2017

	Lending and deposits[a]	Trading and investing[b][c]	Other[d]	
Germany	42.3	13.7	0.3	56.3
United Kingdom	27.9	13.9	0.6	42.4
Japan	23.5	6.8	0.1	30.4
France	11.6	7.1	0.3	19.0
China	9.2	5.0	0.8	15.0
Canada	11.1	3.0	0.1	14.2
Switzerland	8.0	0.8	3.7	12.5
Australia	6.3	5.1		11.4
India	3.8	5.1	0.8	9.7
Luxembourg	7.7	1.0		8.7
Netherlands	5.9	1.9	0.4	8.2
Korea	4.9	1.8	0.7	7.4
Brazil	3.8	2.9		6.7
Italy	5.8	0.8	0.1	6.7
Mexico	4.1	1.8		5.9
Hong Kong	2.5	1.4	1.6	5.5
Spain	4.2	1.0		5.2
Singapore	2.6	1.1	1.1	4.8
Saudi Arabia	3.7	1.0		4.7
Ireland	1.1	0.3	2.5	3.9

a) Lending and deposits includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with banks (including central banks), acceptances, other monetary assets, issued letters of credit net of participations, and unused commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.
b) Includes market-making inventory, AFS securities, counterparty exposure on derivative and securities financings net of collateral and hedging.
c) Includes single reference entity ("single-name"), index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.
d) includes capital invested in local entities and physical commodity inventory.

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LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities. The following discussion of JPMorgan Chase's Liquidity Risk Management should be read in conjunction with pages 110-115 ofJPMorgan Chase's 2016 Annual Report.

LCR and NSFR

The LCR rule requires the Firm to maintain an amount of HQLA that is sufficient to meet its estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. Under the LCR rule, the amount of HQLA held by JPMorgan Chase Bank N.A. and Chase Bank USA, N.A that is in excess of each entity's standalone 100% minimum LCR requirement, and that is not available for transfer to non-bank affiliates, must be excluded from the Firm's reported HQLA. The LCR was required to be a minimum of 100% commencing January 1, 2017. At June 30, 2017, the Firm was compliant with the LCR.

On December 19, 2016, the Federal Reserve published final LCR public disclosure requirements for certain bank holding companies and nonbank financial companies. Effective the second quarter of 2017, the Firm is required to disclose quarterly its consolidated LCR, including the Firm's average LCR for the quarter and the key quantitative components of the average LCR in a standardized template, along with a qualitative discussion of material drivers of the ratio, changes over time, and causes of such changes. The initial public disclosure is required to be provided within 60 days of the end of the second quarter of 2017 and, thereafter, no later than the applicable filing deadline for the Firm's 10-Q or 10-K.

The Basel Committee final standard for the net stable funding ratio ("Basel NSFR") is intended to measure the adequacy of "available" and "required" amounts of stable funding over a one-year horizon. Basel NSFR will become a minimum standard by January 1, 2018 and requires that this ratio be equal to at least 100% on an ongoing basis.

On April 26, 2016, the U.S. NSFR proposal was released for large banks and bank holding companies and was largely consistent with Basel NSFR. The proposed requirement would apply beginning on January 1, 2018, consistent with the Basel NSFR timeline.

The Firm estimates it was compliant with the proposed U.S. NSFR based on data as of March 31, 2017, and on its current understanding of the proposed rule.

HQLA

HQLA is the amount of assets that qualify for inclusion in the LCR. HQLA primarily consists of unencumbered cash and certain high quality liquid securities as defined in the final LCR rule.

As of June 30, 2017, the Firm's HQLA was $577 billion, compared with $524 billion as of December 31, 2016. The increase was largely driven by a reduction in the amount of excess HQLA in JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. that is excluded from the Firm's HQLA. The reduction in the amount of excluded excess HQLA was primarily due to (a) an increase in the amount of cash and securities held by the banks that became'available to transfer to non-bank affiliates in accordance with Section 23A and Section 23B of the Federal Reserve Act and (b) an increase in deposits which funded loans, resulting in less excess HQLA at the banks. The Firm's HQLA may fluctuate from period to period primarily due to normal flows from client activity.

The following table presents the Firm's HQLA included in the LCR, broken out by HQLA-eligible cash and securities as of June 30, 2017.

(in billions)		June 30. 2017
HQLA		
Eligible cash[iJ]	$ 366	
Eligible securities"" 211		
Total HQLA"[1]'	$	577

a) Cash on deposit at central banks, primarily Federal Reserve Banks.
b) Predominantly includes U.S. agency MBS, U.S. Treasuries, and sovereign bonds net of applicable haircuts under the LCR rules.
c) Excludes excess HQLA at JPMorgan Chase Bank. N.A. and Chase Bank USA, N.A. that is not transferable to non-bank affiliates.

As of June 30, 2017, in addition to HQLA reported above, the Firm had approximately $233 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. This includes HQLA-eligible securities included as part of the excess liquidity at JPMorgan Chase Bank, N.A. that is not transferable to non-bank affiliates. The Firm also maintains borrowing capacity at various Federal Home Loan Banks ("FHLBs"), the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of June 30, 2017, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately $258 billion. This remaining borrowing capacity excludes the benefit of securities included in HQLA or other unencumbered securities that are currently pledged at the Federal Reserve Bank discount window, but for which the Firm has not drawn liquidity.

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Funding

Sources of funds

Management believes that the Firm's secured and unsecured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio ($908.8 billion at June 30, 2017) is funded with a portion of the Firm's deposits ($1,439.5 billion at June 30, 2017), and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest

rate and liquidity risk characteristics. Securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities-debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

The table below summarizes, by line of business, the deposits balances as of June 30, 2017, and December 31, 2016, and the average deposits balances for the three and six months ended June 30, 2017 and 2016, respectively.

Three rribnttaendeti June 30.; 'Z ■ Six months ended Jun?30,1

f

Consumer & Community Banking
Corporate & Investment Bank
Commercial Banking
Asset & Wealth Management
Corporate
Total Firm

t Average.
June 30, .December 31,-' ' .2016.
"2017

Average.

648,369	$ 467,858	173,964	146,758	2,524
618.337	412,434	179,532	161.577	3.299
639,873	$ 442,387	173,081	150,786	4,002
583,115	407,084	169,090	151.214	5,463
572,699	399,853	170.105	150.915	6,046

:2016. I^J, . ;2017 y./^te.^016j

631,441 $ 434,968 174,843 154,776 4,870

$ 1,439,473 $ 1,375,179 $ 1,410,129 $ 1,315,966 $ 1,400,898 $ 1,299,618

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer deposits, which are considered a stable source of liquidity. Additionally, the majority of the Firm's wholesale operating deposits are also considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.

As of June 30, 2017, the Firm's loans-to-deposits ratio was 63%, compared with 65% at December 31, 2016. Total deposits for the Firm were $1,439.5 billion as of June 30, 2017, compared with $1,375.2 billion at December 31, 2016 (62% and 61% of total liabilities at June 30, 2017, and December 31, 2016, respectively). Deposits increased due to both higher wholesale and consumer deposits. The higher wholesale deposits were driven by growth in client activity in ClB's Securities Services and Treasury Services businesses, partially offset by lower balances in AWM reflecting balance migration into the Firm's investment-related products, and the impact of seasonality in both CB and AWM. The higher consumer deposits reflected the continuation of strong growth from existing and new customers, and low attrition rates.

The Firm believes average deposit balances are generally more representative of deposit trends. The increase in average deposits for the three and six months ended June 30, 2017, compared with the three and six months ended June 30, 2016, was driven by an increase in both consumer and wholesale deposits. For further discussions of deposit and liability balance trends, see the discussion of the Firm's Business Segment Results and the Consolidated Balance Sheets Analysis on pages 18-40 and pages 11-12, respectively.

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The following table summarizes short-term and long-term funding, excluding deposits, as of June 30, 2017, and December 31, 2016, and average balances for the three and six months ended June 30, 2017 and 2016, respectively. For additional information, see the Consolidated Balance Sheets Analysis on pages 11-12 and Note 10.

; Sources of funds (excluding deposits) ■(inmillions) - J;': ,;A

June 30, ■2017 '

Average

TitH^ifflpn^'oMeB'J^^i,^ ""Six antMs^v^'^^fSi,}

Average"

2017

2017

2016

2016;

bece'mber.3i;.2016 '"

22,207 $ 11,738 $ 19,466 $ 17,462 $ 16,432 $ 17,499

Obligations of Firm-administered multi-seller conduits'" $ 2,928 $

30,936 $ 22,705 $ 23,693 $ 20,107 $ 23,427 $

Securities loaned or sold under agreements to repurchase:

Securities sold under agreements to repurchase"" $ 149,406

Securities loaned[10]"" 11,217

149,826 $ 178,624 $ 158,142

12.137 13,505 13,832

175,963 $ 154.330 13,342 14,445

$ 160,623 $ 161.963 $ 192,129 $ 171.974 $ 189,305 $ 168,775

Senior notes

Trust preferred securities Subordinated debt Structured notes

$ 156,637 $ 2,338 18,994 43,077

151,042 2,345 21,940 37.292

153,661 $ 2,340 20,546 42,957

152,246 3,969 25,176 35,602

$ 151,557 $ 2,342 20,857 40,941

150,657 3.970 25.271 34.576

$ 221,046 $ 212,619 $ 219,504 $ 216,993 $ 215,697 $ 214,474

Credit card securitization'"

Other securitizations'""

Federal Home Loan Bank ("FHLB") advances

Other long-term secured funding"[11]

$ 25,732 $

68,464 3,463

$

31,181 1,527

79,519 3,107

27,034 $

1,003 73,053

3,311

27,014 1,700

69,528 5,205

28,226 $

1,262 75,155

3,204

27.356 1,729

70,384 5,085

$ 97,659 $ 115,334 $ 104,401 $ 103,447 $ 107,847 $ 104.554

Preferred stock""

Common stockholders' equity""

$ 26,068 $ $ 232,415 $

26,068 $ 228,122 $

26,068 $ 230,200 $

26,068 224,429

26,068 $ 228,959 $

26,068 222.995

a) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
b) Excluded long-term structured repurchase agreements of $2.1 billion and $1.8 billion as of June 30, 2017, and December 31, 2016. respectively, average balances of $1.9 billion and $2.7 billion for the three months ended June 30, 2017 and 2016. respectively, and $1.4 billion and $3.1 billion for the six months ended June 30, 2017 and 2016, respectively.
c) Excludes long-term securities loaned of $1.3 billion and $1.2 billion as of June 30. 2017, and December 31, 2016, respectively, average balances of $1.2 billion and $1.3 billion for the three months ended June 30, 2017 and 2016. respectively, and $1.3 billion for both the six months ended June 30, 2017 and 2016.
d) The prior period amounts have been revised to conform with the current period presentation.
e) Excludes federal funds purchased.
f) Other securitizations include securitizations of student loans. The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio. For additional information about the sale of the student loan portfolio, see CCB Business Segment Results on pages 20-24. The Firm's wholesale businesses also securitize loans for client-driven transactions, which are not considered to be a source of funding for the Firm and are not included in the table.
g) Includes long-term structured notes which are secured.
h) For additional information on preferred stock and common stockholders' equity see Capital Risk Management on pages 42-48 and the Consolidated statements of changes in stockholders' equity on page 86; and Note 22 and Note 23 ofJPMorgan Chase's 2016 Annual Report.

Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets.

The increase in the average balance of securities loaned or sold under agreements to repurchase for the three and six months ended June 30, 2017, compared with June 30, 2016, was largely due to higher secured financing of trading assets-debt and equity instruments in the CIB related to client-driven market-making activities. The

balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios); and other market and portfolio factors.

The Firm's sources of short-term unsecured funding primarily consist of issuance of wholesale commercial paper and other borrowed funds. The increase in commercial paper and other borrowed funds as of June 30, 2017, compared to December 31, 2016, was due to a change in the mix of funding from securities sold under repurchase agreements.

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Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven primarily by expected client activity, liquidity considerations, and regulatory requirements, including TLAC requirements. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide maximum flexibility in support of both bank and nonbank subsidiary funding needs. The Parent Company advances substantially all net funding proceeds to the Intermediate Holding Company ("IHC"). The IHC does not issue debt to external counterparties. The following table.summarizes long-term unsecured issuance and maturities or redemptions for the three and six months ended June 30, 2017 and 2016. For additional information on long-term debt and the IHC, see Note 21 and Executive Overview of JPMorgan Chase's 2016 Annual Report.

Long-term unsecured funding

r.?"j v!V:..v V. ■>'erided;Jurie 30; ,' . ■, 'jurie-36."L\ 'J Issuance				
Senior notes issued in the U.S. market	$ 8,308	$ 5,968	$14,773	$13,187
Senior notes issued in non-U.S. markets	2,210	4,891	2,210	4.891
Total senior notes	10,518	10,859	16,983	18,078
Subordinated debt	-	-	-	-
Structured notes	8,160	5,278	16,594	13.611
Total long-term unsecured funding - issuance	$18,678	$16,137	$33,577	$31,689
Maturities/redemptions				
Senior notes	$ 3,615	$ 6,499	$14,042	$16,310
Trust preferred securities	-	-	-	-
Subordinated debt	2,011	2,000	3,006	2,002
Structured notes	7,043	4.437	12,373	8.541
Total long-term unsecured funding - maturities/ redemptions	$12,669	$12,936	$29,421	$26,853

The Firm raises secured long-term funding primarily through securitization of consumer credit card loans and advances from the FHLBs. The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemptions for the three and six months ended June 30, 2017 and 2016, respectively.

Long-term secured funding

. Issuance :?¥ _'.MaturitiepRWempte ZZk~-*-s y?^[^^5^^P?!°ⁿSii

Credit card securitization Other securitizations'³' FHLBadvances

Other long-term secured funding""

3,814 $ 3,016 $

236

5,852 80

2,350 61 3 46

$ 7,006 55 11,054 124

$ 2,775 119 2,054 89

$ 344 $ 4,050 $ 8,948 $ 2,460 $ 1,992 $ 4,140 $ 18,239 $ 5,037

a) Other securitizations includes securitizations of student loans. The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio. For additional information about the sale of the student loan portfolio, see CCB Business Segment Results on pages 20-24.
b) Includes long-term structured notes which are secured.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16 ofJPMorgan Chase's 2016 Annual Report.

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Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm.

Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see SPEs on page 14, and Liquidity risk and credit-related contingent features in Note 4.

The credit ratings of the Parent Company and the Firm's principal bank and nonbank subsidiaries as of June 30, 2017, were as follows.

Muhe-30;,2017

Moody's

Standard & Poor's Fitch Ratings

JPMorgan Chase & Co.
.Short-term[1]

P-2 A-2 Fl
~, ijssuer »)^Out)6oR_j:J

Stable Stable Stable

JPMorgan Chase Bank, N.A. Chase. Bank USA, N.A.,

P-l A-r F1 +

. Short-term, • issuer •'

Stable Stable Stable

' ' J.P. Mqi^'Secunties PJc"..κ-,i;j

P-l A-l F1 +

Al A+ AA-
;Longrte[f]fm'Short-term^ • >{ issuer',7;,:jssuer;;i'; '

Stable Stable Stable

On June 1, 2017, JPMorgan Chase Bank, N.A. terminated its guarantee of the payment of all obligations of J.P. Morgan Securities pic arising after such termination. J.P. Morgan Securities pic, whose credit ratings previously reflected the benefit of this guarantee, is now rated on a stand-alone non-guaranteed basis.

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

Although the Firm closely monitors and endeavors to manage, to the extent it is able, factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

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MARKET RISK MANAGEMENT

Market risk is the risk of loss arising from potential adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads. For a discussion of the Firm's Market Risk Management organization, tools used to measure risk, risk monitoring and control and risk identification and classification, see Market Risk Management on pages 116-123 ofJPMorgan Chase's 2016 Annual Report.

Value-at-risk

JPMorgan Chase utilizes value-at-risk ("VaR"), a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm therefore considers other measures such as stress testing and nonstatistical measures, in addition to VaR, to capture and manage its market risk positions. For further information, see Other risk measures on pages 121-123 of JPMorgan Chase's 2016 Annual Report.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and measurements, and other factors. Such changes may affect historical comparisons of VaR results. For information regarding model reviews and approvals, see Model Risk Management on page 128 of JPMorgan Chase's 2016 Annual Report.

The Firm's Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. For risk management purposes, the Firm believes this methodology provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business, and provides the necessary and appropriate information to respond to risk events on a daily basis. The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. For further information regarding the key differences between Risk Management VaR and Regulatory VaR, see page 118 of JPMorgan Chase's 2016 Annual Report. For additional information on Regulatory VaR and the other components N of market risk regulatory capital for the Firm (e.g., VaR-based measure, stressed VaR-based measure and the respective backtesting), see JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website at: (<http://investor.shareholder.com/jpmorganchase/basel.cfm>).

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The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR ^

^':t '-"^":" Ryf^^'X'? >y. .' ISL'• 7 4 Three mbritnl.ended.-%

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i^On'jnilljpns)'".,' 7:':&^..\7.J?i77'i7777.i 7'7^.7;:.4V6'...:Mip ,, , Max . ■ Ayg.:, ,, ..Mjnj'^i,',' Maai.^'j.-'jl^g;.^"^.

J/Min , ;£.'xMax)

CIB trading VaR by risk type									
Fixed income	$ 28	$ 25	$ 31	$ 28	$ 20	$ 40	$ 46$ 37	$ 62	
Foreign exchange	8	512	10	616	127 17				
Equities	12	916	11	814	1410 20				
Commodities and other	8	610	85	10	9 7 10				
Diversification benefit to CIB trading VaR	(30) (a) NM ""	NM ""	(34) 1,1 NM ""	NM ""	(37) "' NM	"" NM ""			
CIB trading VaR	26	20	31	23	14	34	44	35 59	
Credit portfolio VaR	9	6	10	10	9	12	12	11 13	
Diversification benefit to CIB VaR	(8) "' NM ""	NM ""	(8) "' NM ""	NM ""	(12) "' NM	"" NM ""			
									1 7 3 NM
									5 13 4 NM

3 11 4

(5)

CIB VaR 27 22 32 25 17

38 44 34 59

CCB VaR 2 2

Corporate VaR 3 2

NM
NM
NM
(1)

AWM VaR - -

Diversification benefit to other VaR (2) NM

Other VaR 3 3 4 3 3 4 13 10 16

Diversification benefit to CIB and other VaR (3) "' NM "" NM "" (3) "' NM "" NM "" (12) "' NM "" NM

Total VaR $27 $22 $ 33 $ 25 $ 1.7 $ 37 $ 45 $36 $ 56

a) Average portfolio VaR is less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that the risks are not perfectly correlated.

b) Designated as NM. because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

Quarter over Quarter results Average total VaR increased by $2 million for the three months ended June 30, 2017 as compared with the prior quarter, reflecting a change in exposure profile for the Equities risk type which also contributed to a reduction in the diversification benefit to CIB trading VaR.

Vear over Year results

Average total VaR decreased by $18 million for the three months ended June 30, 2017, compared with the same period in the prior year. The decrease in average total VaR is primarily in the Fixed income, Foreign Exchange and Equities risk types. The reduction reflected enhancements to VaR models for certain asset backed products, refinement of the scope of positions included in risk management VaR, and reduced volatility in the one-year historical look-back period.

The Firm refined the scope of positions included in risk management VaR during the third quarter of 2016 and refined the historical proxy time series inputs to certain VaR models during the first quarter of 2017. In the absence of these refinements, the average Total VaR for the three months ended June 30, 2017 would have been higher by $10 million and each of the components would have been higher by the amounts reported in the following table:

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v* . '.' ', """h'■' havebeenihigherfor<the>thfeemonths^
[(in,iifiillipns): <' <./, i';>4 J,s V .; ■'• fended-June-3b;.2pi7. •* *>viJSI

CIB fixed income VaR	$	6
CIB equities VaR		3
CIB trading VaR		8
CIB VaR		10
Corporate VaR		8
AWM VaR		5
Other VaR		8

VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.

VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses actually recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: gains and losses on the positions included in the Firm's Risk Management VaR excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares actual daily market risk-related gains and losses with the Firm's Risk Management VaR for the six months ended June 30, 2017. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of back-testing disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the six months ended June 30, 2017, the Firm observed seven VaR back-testing exceptions and posted gains on 80 of the 129 days. The Firm observed four VaR back-testing exceptions and posted gains on 36 of the 65 days for the three months ended June 30, 2017.

Daily Market Risk-Related Gains and Losses

vs. Risk Management VaR (1-day, 95% Confidence level)
Six months ended June 30, 2017

mammt Market Risk-Related Gains and Losses _

Risk Management VaR

120 100 80

60 -1 40 20

0 -\

-20

-40 ■ -60

-80 --100

February

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Earnings-at-risk

The VaR and sensitivity measures illustrate the economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables. The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and interest rate-sensitive fees. For a summary by line of business, identifying positions included in earnings-at-risk, see the table on page 117 ofJPMorgan Chase's 2016 Annual Report.

The Firm generates a baseline for net interest income and certain interest rate sensitive fees, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). Earnings-at-risk scenarios estimate the potential change in this baseline, over the following 12 months utilizing multiple assumptions. These scenarios consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions that could be taken by the Firm in response to any such instantaneous rate changes. Mortgage prepayment assumptions are based on scenario interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The pricing sensitivity of deposits in the baseline and scenarios use modeled rates paid which may differ from actual rates paid due to timing lags and other factors. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

The Firm's U.S. dollar sensitivities are presented in the table below.

JPMorgan Chase's 12-month earnings-at-risk sensitivity

profiles

f(in billions) . 7^a_J_+ZO^tis	.jt-lOObps	^lCXJbps _..	^OObps j
June 30,2017	$ 3.6	$ Z.Z	$ (4.5)	NM ">'
December 31,2016	$ 4.0	$ 2.4	NM ""	NM ""

a) As a result of the June 2017 increase in the Fed Funds target rate to between 1.00% and 1.25%, the -100 bps sensitivity has been included.
b) Given the level of market interest rates, these downward parallel earnings-at-risk scenarios are not considered to be meaningful.

The non-U.S. dollar sensitivities for an instantaneous increase in rates by 200 and 100 basis points results in a 12-month benefit to net interest income of approximately $800 million and $500 million, respectively, at June 30, 2017. The non-U.S. dollar sensitivity for an instantaneous decrease in rates by 200 and 100 basis points is not material to the Firm's earnings-at-risk at June 30, 2017.

The Firm's sensitivity to rates is largely a result of assets repricing at a faster pace than deposits.

Separately, another U.S. dollar interest rate scenario used by the Firm - involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels - results in a 12-month benefit to net interest income of approximately $800 million. The increase in net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The result of the comparable non-U.S. dollar scenario was not material to the Firm.

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Other sensitivity-based measures The Firm quantifies the market risk of certain investment and funding activities by assessing the potential impact on net revenue and OCI due to changes in relevant market variables. For additional information on the positions

captured in other sensitivity-based measures, please refer to the Risk identification and classification table on page 117 of JPMorgan Chase's 2016 Annual Report.

The table below represents the potential impact to net revenue or OCI for market risk-sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported along with the positions being hedged. The sensitivities disclosed in the table below may not be representative of the actual gain or loss that would have been realized at June 30, 2017 and December 31, 2016, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future deterioration in these sensitivities.

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(Activity, - >v /	Description/.' |. ..'..;•„>■;.	fyj/l,:. ^.-Sewsithrfty,treasure;.,	^.Jm). ^:;:.?PV?,^.	- .;Jx.'.'^R^.!/
Investment activities				
Investment management activities	Consists of seed capital and related hedges; and fund co-investments	10% decline in market value	$ (142)	$ (166)
Other investments	Consists of private equity and other investments held at fair value	10% decline in market value	(401)	(358)
Funding activities				
Non-USD LTD cross-currency basis	Represents the basis risk on derivatives used to hedge the foreign exchange risk on the non-USD LTD	i basis point parallel tightening of cross currency basis	(10)	(7)

Non-USD LTD hedges foreign *currency ("FX") exposure*	Primarily represents the foreign *exchange revaluation on the fair value of the derivative hedges*	*currency*	*10% depreciation of (6) (Z3)_*
Funding spread risk - derivatives	Impart of changes in the spread related to derivatives DVA/FVA	1 basis point parallel increase in spread	(5) (4)
Funding spread risk - fair value option elected liabilities"[1]	Impact of changes in the spread related to fair value option elected liabilities DVA	1 basis point parallel	increase in spread 19 17

(a) Impact recognized through OCI.

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CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for credit losses includes a formula-based component, an asset-specific component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters. For further discussion of these components, areas of judgment and methodologies used in establishing the Firm's allowance for credit losses, see pages 105-107, pages 132-133 and Note 15 ofJPMorgan Chase's 2016 Annual Report; and see Allowance for credit losses on pages 63-65 and

Note 12 of this Form 10-Q.

As noted in the discussion on pages 132-133 of JPMorgan Chase's 2016 Annual Report, the Firm's allowance for credit losses is sensitive to numerous factors, which may differ depending on the portfolio. Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. The Firm uses its best judgment to assess these economic conditions and loss data in estimating the allowance for credit losses and these estimates are subject to periodic refinement based on changes to underlying external or Firm-specific historical data. During the second quarter of 2017, the Firm refined its loss estimates relating to the wholesale portfolio. See Note 12 of this Form 10-Q for further discussion. The use of

alternate estimates, data sources, adjustments to modeled loss estimates for model imprecision and other factors would result in a different estimated allowance for credit losses, as well as impact any related sensitivities described below.

To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on the Firm's modeled credit loss estimates as of June 30, 2017, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- A combined 5% decline in housing prices and a 100 basis point increase in unemployment rates from current levels could imply:
  - ° an increase to modeled credit loss estimates of approximately $550 million for PCI loans.
  - ° an increase to modeled annual credit loss estimates of approximately $100 million for the residential real estate, excluding PCI loans.
- For credit card loans, a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled annual credit loss estimates of approximately $925 million.
- An increase in PD factors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $1.6 billion.
- A 100 basis point increase in estimated loss given default ("LGD") for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may

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offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows and the judgments made in evaluating the risk factors related to its loss estimates, management believes that its current estimate of the allowance for credit losses is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 2.

June 30.2017 - '.! jptal-asMis?at'/..:",tbtat,ievei'3!i

$ 350.5	$ 7.3		
		56.5	4/5
407.0	11.9		
215.7	0.5		
2.0	0.3		
5.8	5.8		
		26.2	1.9

i(in bniions,^cept ratios) V;/ijHu?^:• "l^'f^a lM?;. assets ^;

Trading-debt and equity instruments

Derivative receivables[1'"]

Trading assets

AFS securities

Loans

MSRs

Other

Total assets measured at fair value on , a recurring basis $ 656.7 $ 20.4

$ 657.7 $ 21.1

S 2.563.2

Total assets measured at fair value on a

nonrecurring basis 1.0 0.7

0.8% 3.2%

Total assets measured at fair value Total Firm assets

Level 3 assets as a percentage of total Firm assets['3']

Level 3 assets as a percentage of total Firm assets at fair value[13']

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $4.6 billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

Valuation

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation technique to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs - including, for example,
transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 2.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Firm see Note 2.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 2.

Goodwill impairment

Management applies significant judgment when testing goodwill for impairment. For a description of the significant valuation judgments associated with goodwill impairment, see Goodwill impairment on pages 133-134 of JPMorgan Chase's 2016 Annual Report.

For the three months ended June 30, 2017, the Firm reviewed current conditions (including the estimated effects of regulatory and legislative changes and the current estimated market cost of equity) and prior projections of business performance for all its businesses. Based upon such reviews, the Firm concluded that the goodwill allocated to its reporting units was not impaired as of June 30, 2017.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 14.

Income taxes
For a description of the significant assumptions, judgments and interpretations associated with the accounting for income taxes, see Income taxes on page 134 of JPMorgan Chase's 2016 Annual Report.

Litigation reserves
For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 21 of this Form 10-Q, and Note 31 of JPMorgan Chase's 2016 Annual Report.

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ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board ("FASB") Standards Issued but not yet Adopted

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Revenue recognition -revenue from contracts with customers

issued May 2014
Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received.

Changes the accounting for certain contract costs, including whether they may be offset against revenue in the Consolidated statements of income, and requires additional disclosures about revenue and contract costs.

May be adopted using a full retrospective approach or a modified, cumulative effect approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.
Required effective date: January 1, 2018.'"

Because the guidance does not apply to revenue associated with financial instruments, including loans and securities that are accounted for under other U.S. GAAP, the Firm does not expect the new revenue recognition guidance to have a material impact on the elements of its Consolidated statements of income most closely associated with financial instruments, including securities gains, interest income and interest expense.

The Firm plans to adopt the revenue recognition guidance in the first quarter.of 2018 using the modified retrospective method of adoption. The Firm's implementation efforts include the identification of revenue within the scope of the guidance, as well as the evaluation of revenue contracts and related accounting policies. While the Firm has not yet identified any material changes in the timing of revenue recognition, the Firm's review is ongoing, and it continues to evaluate the presentation of certain contract costs (whether presented gross or offset against noninterest revenue). The Firm plans to expand its qualitative disclosures within the noninterest revenue and noninterest expense note to the Consolidated Financial Statements.

Recognition and measurement of financial
assets and financial liabilities

issued January 2016
Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings.

Generally requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption.
Required effective date: January 1, 2018 '*'

The Firm early adopted the provisions of this guidance related to presenting DVA in OCI for financial liabilities where the fair value option has been elected, effective January 1, 2016. The Firm plans to adopt the portions of the guidance that were not eligible for early adoption in the first quarter of 2018.

The Firm is currently evaluating the additional impacts on the Consolidated Financial Statements. The Firm's implementation efforts include the identification of securities within the scope of the guidance, the evaluation of the measurement alternative available for equity securities without a readily determinable fair value, and the related impact to accounting policies, presentation, and disclosures.

Leases

Issued February 2016

Requires lessees to recognize all leases longer than twelve months on the Consolidated balance sheets as lease liabilities with corresponding right-of-use assets. Requires lessees and lessors to classify most leases using principles similar to existing lease accounting, but eliminates the "bright line" classification tests. Expands qualitative and quantitative disclosures regarding leasing arrangements. Requires adoption using a modified cumulative effect approach wherein the guidance is applied to all periods presented.

- Required effective date: January 1, 2019.'5'
- The Firm is currently evaluating the potential impact on the Consolidated Financial Statements by reviewing its existing lease contracts and service contracts that may include embedded leases. The Firm expects to recognize lease liabilities and corresponding right-of-use assets (at their present value) related to predominantly all of the $10 billion of future minimum payments required under operating leases as disclosed in Note 30 ofJPMorgan Chase's 2016 Annual report. However, the population of contracts subject to balance sheet recognition and their initial measurement remains under evaluation. The Firm does not expect material changes to the recognition of operating lease expense in its Consolidated statements of income.

  The Firm plans to adopt the new guidance in the first quarter of 2019.

Financial instruments -credit losses

Issued June 2016
Replaces existing incurred loss impairment guidance and establishes a single allowance framework for financial assets carried at amortized cost (including HTM securities), which will reflect management's estimate of credit losses over the full remaining expected life of the financial assets.

Eliminates existing guidance for PCI loans, and requires recognition of an allowance for expected credit losses on financial assets purchased with more than insignificant credit deterioration since origination.

Amends existing impairment guidance for AFS securities to incorporate an allowance, which will allow for reversals of impairment losses in the event that the credit of an issuer improves.

Requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption.
Required effective date: January 1, 2020 '

The Firm has begun its implementation efforts by establishing a Firmwide, cross-discipline governance structure. The Firm is currently identifying key interpretive issues, and is assessing existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. The Firm is also evaluating the timing of adoption, as early adoption is permitted as of January 1, 2019.

The Firm experts that the new guidance will result in an increase in its allowance for credit losses due to several factors, including:

1. The allowance related to the Firm's loans and commitments will increase to cover credit losses over the full remaining expected life of the portfolio, and will consider expected future changes in macroeconomic conditions
2. The nonaccretable difference on PCI loans will be recognized as an allowance, offset by an increase in the carrying value of the related loans
3. An allowance will be established for estimated credit losses on HTM securities

The extent of the increase is under evaluation, but will depend upon the nature and characteristics of the Firm's portfolio at the adoption date, and the macroeconomic conditions and forecasts at that date.

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FASB Standards Issued but not yet Adopted (continued)

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Classification of certain cash receipts and cash payments in the statement of cash fiows

Issued August 2016
Provides targeted amendments to the classification of certain cash flows, including treatment of cash payments for settlement of zero-coupon debt instruments and distributions received from equity method investments.

Requires retrospective application to all periods presented.
Required effective date: January 1, 2018. '*'

No material impact is expected because the Firm is either already in compliance with the new guidance or the balances to which it would be applied are immaterial. The Firm plans to adopt the new guidance in the first quarter of 2018.

Treatment of restricted cash on the statement of cash flows

Issued November 2016
Requires inclusion of restricted cash in the cash and cash equivalents balances in the Consolidated statements of cash flows.

Requires additional disclosures to supplement the Consolidated statements of cash flows.

Requires retrospective application to all periods presented.
Required effective date: January 1, 2018 ""

The guidance will have no impact on the Firm's Consolidated statements of income or Consolidated balance sheets, but will result in reclassification of restricted cash balances and associated changes on the Consolidated statements of cash flows.

The Firm plans to adopt the new guidance in the first quarter of 2018.

Definition of a business Issued January 2017

Narrows the definition of a business and clarifies that, to be considered a business, the fair value of the gross assets acquired (or disposed of) may not be substantially all concentrated in a single identifiable asset or a group of similar assets.

In addition, in order to be considered a business, a set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs.

Required effective date: January 1, 2018.[lal]

No material impact is expected because the guidance is to be applied prospectively, although it is anticipated that after adoption, fewer transactions will be treated as acquisitions or dispositions of a business. The Firm plans to adopt the new guidance in the first quarter of 2018.

Goodwill

Issued January 2017
Requires an impairment loss to be recognized when the estimated fair value of a reporting unit falls below its carrying value.

Eliminates the second condition in the current guidance that requires an impairment loss to be recognized only if the estimated implied fair value of the goodwill is below its carrying value.
Required effective date: January l, 2020.'"

Based on current impairment test results, the Firm does not expect a material effect on the Consolidated Financial Statements.

After adoption, the guidance may result in more frequent goodwill impairment losses due to the removal of the second condition. The Firm is evaluating the timing of adoption.

Presentation of net periodic pension cost and net periodic postretirement benefit cost

issued March 2017
Requires the service cost component of net periodic pension and postretirement benefit cost to be reported separately in the consolidated results of operations from the other components (e.g., expected return on assets, interest costs, amortization of gains/losses and prior service costs).

Requires presentation in the consolidated results of operations of the service cost component in the same line item as other employee compensation costs and presentation of the other components in a different line item from the service cost component.
Required effective date: January 1. 2018

The guidance will have no impact on the Firm's net income, but based on recent trends, the Firm expects that the guidance will result in an increase in compensation expense and a reduction in other expense. The Firm plans to adopt the new guidance in the first quarter of 2018.

Premium amortization on purchased callable debt securities Issued March 2017
Requires amortization of premiums to the earliest call date on debt securities with call features that are explicit, noncontingent and callable at fixed prices and on preset dates.

Does not impact securities held at a discount; the discount continues to be amortized to the contractual maturity.

Requires adoption on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption.
Required effective date: January l. 2019.'"

The Firm is currently evaluating the impact on the Consolidated Financial Statements as well as the timing of adoption. At adoption, the guidance is expected to result in a cumulative effect adjustment which will reduce retained earnings with a corresponding increase to AOCI for AFS securities. Post-adoption, it will result in reduced interest income prior to the call date on callable debt securities held at a premium because those premiums will be amortized over a shorter time period.

The Firm's implementation efforts include identifying the population of debt securities subject to the new guidance (primarily obligations of U.S. states and municipalities) and quantifying the expected impact.

(a) Early adoption is permitted.

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Form 10-Q contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events;

- Changes in laws and regulatory requirements, including capital and liquidity requirements affecting the Firm's businesses, and the ability of the Firm to address those requirements;
- Heightened regulatory and governmental oversight and scrutiny ofJPMorgan Chase's business practices, including dealings with retail customers;
- Changes in trade, monetary and fiscal policies and laws;
- Changes in income tax laws and regulations;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The success of the Firm's business simplification initiatives and the effectiveness of its control agenda:
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies, including the introduction of new accounting standards;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security and integrity of its financial, accounting, technology, data processing and other operating systems and facilities;
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access the Firm's information or disrupt its systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in JPMorgan Chase's 2016 Annual Report on Form 10-Kforthe year ended December 31, 2016.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

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JPMorgan Chase & Co. Consolidated statements of income (unaudited)

Revenue

Investment banking fees

Principal transactions

Lending- and deposit-related fees

Asset management, administration and commissions

Securities gains/Oosses)

Mortgage fees and related income

Card income

Other income

Noninterest revenue

Interest income Interest expense

1,810 3,137 1,482 3,824 (34) 404 1,167 1,472

13,262

15,650 3,442

1,644 2,976 1,403 3,681 21 689 1,358 1.261

13,033

13,813 2,466

3,627 6,719 2,930 7,501 (37) 810 2,081 2,242

25,873

30,692 6,420

2,977 5,655 2,806 7,305 72 1,356 2,659 2,062

24,892

27,365 4,638

Net interest income

Total net revenue

Provision for credit losses

Noninterest expense

Compensation expense Occupancy expense

Technology,,communications and equipment expense Professional and outside services Marketing Other expense

12,208

25,470 1,215

7,706 912

1,870

1,644 756

1,618

11,347

24,380 1,402

7,778 899 1,665 1.700 672 924

24,272

50,145 2,530

15,907 1,873 3,698 3,187 1,469 3,391

22,727

47,619 3,226

15.438 1,782 3,283 3,248 1,375 2,349

Total noninterest expense

Income before income tax expense

Income tax expense

14,506
9,749 2,720
13,638
9,340 3,140
29,525
18,090 4,613
27,475
16,918 5,198
13,477 $
Net income applicable to common stockholders'"
Net income per common share data
Basic earnings per share Diluted earnings per share
Weighted-average basic shares'"
Weighted-average diluted shares'"
Cash dividends declared per common share
6,555

1.83 $ 1.82

3,574.1 3,599.0 0.50 $
5,728

1.56 $ 1.55

3,675.5 3,706.2 0.48 $
12,531 $

3.49 3.47

3,587.9 3,614.7
1.00 $
10,773

2.92 2.89

3.693.0 3,721.9 0.92

(a) The prior period amounts have been revised to conform with the current period presentation. The revision had no impact on the Firm's reported earnings per share.

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

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JPMorgan Chase & Co. Consolidated statements of comprehensive income (unaudited)

ith^eri'deJir X?;';*^gvSixmontlisS6ed$
'.■ !•' June:
.(in rnillions)..,
Net income

Other comprehensive income/doss), after-tax

Unrealized gains on investment securities Translation adjustments, net of hedges Cash flow hedges

Defined benefit pension and OPEB plans DVA on fair value option elected liabilities

12017

7,029 $

457

53 19 2

:{2Q17;/v

'v2.Q16vi>&"

867 3

(87) 56 (3)

6.200 $ 13,477 $

695 7

144 4

(67)

2016:

11,720

1.292 1

(157) 81 55

Total other comprehensive income, after-tax

Comprehensive income

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

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JPMorgan Chase & Co. Consolidated balance sheets (unaudited)

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Assets
Cash and due from banks Deposits with banks
Federal funds sold and securities purchased under resale agreements (included $18,026 and $21,506 at fair value) Securities borrowed (included $1,590 and $0 at fair value)
Trading assets (included assets pledged of $136,213 and $115,847)
Securities (included $215,697 and $238,891 at fair value and assets pledged of $16,608 and $16,115) Loans (included $1,979 and $2,230 at fair value)
Allowance for loan losses
Loans, net of allowance for loan losses
Accrued interest and accounts receivable
Premises and equipment
Goodwill
Mortgage servicing rights Other intangible assets
Other assets (included $7,412 and $7,557 at fair value and assets pledged of $1,493 and $1,603)

21,781 427,380 218,570 90,654 407,064 263,458 908,767 (13,363)

895,404 64,038 14,206 47,300 5,753 827 106,739

23,873 365,762 229,967
96,409 372,130 289,059 894,765 (13,776)

880,989 52,330 14.131 47,288 6,096 862 112.076

$ 2,563,174 $ 2,490,972

Liabilities
Deposits (included $17,754 and $13,912 at fair value)
Federal funds purchased and securities loaned or sold under repurchase agreements (included $721 and $687 at fair value) Commercial paper
Other borrowed funds (included $8,515 and $9,105 at fair value) Trading liabilities
Accounts payable and other liabilities (included $11,543 and $9,120 at fair value) Beneficial interests issued by consolidated VIEs (included $72 and $120 at fair value)
Long-term debt (included $43,484 and $37.686 at fair value)

165,666 11,738 22,705
136,659
190,543 39,047
295.245

$ 1,439,473 $ 1,375,179

165,621 22,207 30,936
133,423
189,160 30,898
292,973

Total liabilities' 3'

Commitments and contingencies (see Notes 19, 20 and 21) Stockholders' equity
Preferred stock ($1 par value; authorized 200,000,000 shares; issued 2,606,750 shares) Common stock ($1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares) Additional paid-in capital Retained earnings
Accumulated other comprehensive (loss)
Shares held in restricted stock units ("RSU") Trust, at cost (472,953 shares)
Treasury stock, at cost (585,969,485 and 543,744.003 shares)
Total stockholders' equity

26,068 4,105 90,604 171,488 (392) (21) (33,369)

258,483

26,068 4,105 91,627 162,440 (1.175) (21) (28,854)

254,190

Total liabilities and stockholders' equity

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at June 30, 2017, and December 31. 2016. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which are eliminated in consolidation.

(in millions)

Assets

Trading assets Loans

All other assets

Total assets

Liabilities

Beneficial interests issued by consolidated VIEs All other liabilities

Jun 30, 2017 Dec 31, 2016

2,688 71,012 2,819

76,519 $

30,898 427

Total liabilities

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit ofJPMorgan Chase. At both June 30, 2017, and December 31, 2016. the Firm provided limited program-wide credit enhancements of 2.4 billion related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 13.

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

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JPMorgan Chase & Co. Consolidated statements of changes in stockholders' equity (unaudited)

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Preferred stock		
Balance at January 1 and June 30	$ 26,068	$ 26,068 ,
Common stock		
Balance at January 1 and June 30	4,105	4.105
Additional paid-in capital		
Balance at January 1	91,627	92,500
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	(865)	(539)
Other	(158)	13_
Balance at June 30	90,604	91,974
Retained earnings		
Balance at January 1	162,440	146,420
Cumulative effect of change in accounting principle	-	(154)
Net income	13,477	11,720
Dividends declared:		
Preferred stock	**(823)**	**(823)**
Common stock ($1.00 and $0.92 per share)	**(3,606)**	**(3,414)**
Balance at June 30	171,488	153,749
Accumulated other comprehensive income		

Balance at January 1	(1,175) 192	
Cumulative effect of change in accounting principle	- 154	
Other comprehensive income/(loss)	783 1,272	
Balance at June 30	**(392)**	**1,618**
Shares held in R5U Trust at cost		
Balance at January 1 and June 30	(21) (21)	
Treasury stock, at cost		
Balance at January 1	(28,854)	(21,691)
Purchase of treasury stock	(5,839) (4,536)	
Reissuance from treasury stock	**1,324 1,157**	
Balance at June 30	(33,369)	(25,070)
Total stockholders'equity	$ 258,483 $ 252,423	

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

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JPMorgan Chase & Co. Consolidated statements of cash flows (unaudited)

Net income

Adjustments to reconcile net income to net cash provided by operating activities: Provision for credit losses Depreciation and amortization Deferred tax expense Other Originations and purchases of loans held-for-sale

Proceeds from sales, securitizations and paydowns of loans held-for-sale

Net change in:

Trading assets

Securities borrowed

Accrued interest and accounts receivable Other assets Trading liabilities

Accounts payable and other liabilities

Other operating adjustments

13,477 $

2,530 2,968 (161) 1,163 (58,119) 53,053

(22,914) 5,845 (11,940) 11,366 (12,827) (5,189) 7,724

11,720

3,226 2.625 577 1,001 (24.963) 22,356

(52,501) (4.505) (18,407) (10,764) 42.738 3,714 276

Net cash used in operating activities

Investing activities

Net change in:
Deposits with banks
Federal funds sold and securities purchased under resale agreements Held-to-maturity securities:
Proceeds from paydowns and maturities
Purchases Available-for-sale securities:
Proceeds from paydowns and maturities
Proceeds from sales
Purchases
Proceeds from sales and securitizations of loans held-for-investment Other changes in loans, net
All other investing activities, net

(61,618) 11,364

2,289

29,481 42,972 (45,613) 7,762 (24,266) 550

(5,580) (24,624)

2,718 (134)

33,070 22,559 (42,002) 5.599 (43.094) (576)
Net cash used in investing activities
Financing activities Net change in: Deposits
Federal funds purchased and securities loaned or sold under repurchase agreements
Commercial paper and other borrowed funds
Beneficial interests issued by consolidated VIEs Proceeds from long-term borrowings Payments of long-term borrowings Treasury stock purchased Dividends paid
All other financing activities, net

53,122 (43) 18,222 (1,067) 35,530 (47,743) (5,839) (4,386) 115

68.209 13,346 311 (2,668) 36,064 (32,022) (4,536) (4,120) (425)
Net cash provided by financing activities
Effect of exchange rate changes on cash and due from banks
Net decrease in cash and due from banks
Cash and due from banks at the beginning of the period
100
(2,092) 23,873
32
(780) 20,490
Cash and due from banks at the end of the period
Cash interest paid
Cash income taxes paid, net
6,322 1,736
4.283 1.261

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

See the Glossary of Terms and Acronyms on pages 168-175 for definitions of terms and acronyms used throughout the Notes to Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

Note 1 - Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or "the Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing and asset management. For a discussion of the Firm's business segments, see Note 22.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

The unaudited Consolidated Financial Statements prepared in conformity with U.S. GAAP require management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expense, and the disclosures of contingent assets and liabilities. Actual results could be different from these estimates. In the opinion of management, all normal, recurring adjustments have been included for a fair statement of this interim financial information.

These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements, and related notes thereto, included in JPMorgan Chase's 2016 Annual Report.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.

For a further description of JPMorgan Chase's accounting policies regarding consolidation, see Notes 1 and 16 of JPMorgan Chase's 2016 Annual Report.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met. For further information on offsetting assets and liabilities, see Note 1 ofJPMorgan Chase's 2016 Annual Report.

Note 2 - Fair value measurement

For a discussion of the Firm's valuation methodologies for assets, liabilities and lending-related commitments measured at fair value and the fair value hierarchy, see Note 3 ofJPMorgan Chase's 2016 Annual Report.

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The following table presents the assets and liabilities reported at fair value as of June 30, 2017, and December 31, 2016, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

^Jiine3p:2017.(inmillions);. •'

Federal funds sold and securities purchased under resale agreements Securities borrowed Trading assets:

Debt instruments.

Mortgage-backed securities.

U.S. government agencies""

Residential - nonagency

Commercial - nonagency
Total mortgage-backed securities
U.S. Treasury and government agencies'"
Obligations of U.S. states and municipalities
Certificates of deposit, bankers' acceptances and commercial paper
Non-u.S. government debt securities
Corporate debt securities
Loans'"
Asset-backed securities
Total debt instruments
Equity securities Physical commodities'0 Other
Total debt and equity instruments'01 Derivative receivables:
Interest rate
Credit
Foreign exchange Equity
Commodity
A5v£&£; "T&r.vaiu'e hierarchy'.;

18,026 1.S90

37.058 1,530 1.388

1

33.996

65,824 113,460 3,326

39,976 5.041 8.136 1,699 31,689 27,068 31.697 2.739

148.045 251 1.262 11.045

160,603

521,260 24.610

173,433 36.584 14,015

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^'Level ^ jv^:, adjusnTOmsV^'.loral fairvaliie/

365 98 65

18,026 1.590

37,424 1.628 1.453

37 461 4,488 83

40.505 39.037 8,817 1,699 63353 27.529 36.185 2.822

6,278 284
7,293

1,713 1,289 522 963 119

350.506

26,912 1,014
16,662 6.273 5.645

220,147 113,995 4,588 11.776

(496,524) (24,885)
(158,134) (31.274) (8.489)

Total derivative receivables'"
Total trading assets'"
Availablefor-sale securities: Mortgage-backed securities: U.S. government agencies'* Residential - nonagency Commercial - nonagency
Total mortgage-backed securities U.S. Treasury and government agencies'" Obligations of U.5. states and municipalities Certificates of deposit Non-U.S government debt securities Corporate debt securities Asset-backed securities.
Collateralized loan obligations
Other
Equity securities

67.913 13.877 6.667
88,457

32,539 57 11,280 4.132

23,780 6,526

67.917 13378 6,667
88,462 28.158 32,539 57 30,571 4,132

24,327 6.526 925

Total available-for-sale securities
Loans

Mortgage servicing rights
Other assets'"
548
305 5,753 1.934
215.697
1.979 5,753 6.655
Total assets measured at fair value on a recurring basis
Deposits
Federal funds purchased and securities loaned or sold under repurchase agreements Other borrowed funds Trading liabilities:
Debt and equity instruments"' Derivative payables. Interest rate Credit
Foreign excnange Equity
Commodity
Total derivative payables"[1]

68,035 341 933

15,623 721 7,201

484,248 24,789
175,931 39,670 17,145
741.783
20.439
2,131

1,314

36

1,001 1,334 1.208 3,407 177
7.127
(719.306) j

(477.384) (24.498)
(164.051) (33,721) (8.735)
(708,389)
656.712

17,754 721 8.515

91,628

8.206 1.625 14,021 9,356 8.587
41.795
Total trading liabilities
Accounts payable and other liabilities
Beneficial interests issued by consolidated VIEs
Long-term debt

71
26324
7,163

10 1
16.660
133.423

11.543 72 43.484
Total liabilities measured at fair value on a recurring basis

netti striiei

Federal funds sold and securities purchased under resale agreements Securities borrowed Trading assets:
Debt instruments:
Mortgage-backed securities:

U.S. government agencies'"
Residential - nonagency
Commercial - nonagency
Total mortgage-backed securities
U.S. Treasury and government agencies'"
Obligations of U.S. states and mumcioaiities
Certificates of deoosit. bankers' acceptances and commercial paper
Non-U.S. government debt securities
Corporate debt securities
Loans'"
Asset-backed securities
Total debt instruments
Equity securities Physical commodities'[1]' Other
Total debt and equity instruments'"' Derivative receivables:
Interest rate
Credit
Foreign exchange Equity Commodity
Total derivative receivables'
Total trading assets'"
Availabte-for-sale securities:
Mortgage-backed securities:
U.S. government agencies"
Residential - nonagency
Commercial - nonagency
Total mortgage-backed securities
U.S. Treasury and government agencies'"
Obligations of U.S. states and municipalities
Certificates of deposit
Non-U.S. government debt securities
Coroorate debt securities
Asset-backed securities:
Collateralized loan obligations
Other
Equity securities
Total available-for-sale securities
Loans
Mortgage servicing rights
Other assets'"
Total assets measured at fair value on a recurring basis
Deposits $ Federal funds purchased and securities loaned or sold under repurchase agreements Other borrowed funds Trading liabilities:
Debt and equiiy instruments'*' Derivative payables: Interest rate Credit
Foreign exchange Equity
Commodity
Total derivative payables'"

13 19.554

48.010 96,759 5,341

150.110 715 812 158
1.685
151.795

223,943 S

40.586 1.552 1.321

43.459 5,201 8,403 1.649 23.076 22,751 28.965 5.250
138.754 281 1.620 9.341

149.996

602.747 28.256
231.743 34.032 18.360
915.138

64.005 14,442 9.104
87.551 29 31.592 106 12,495 4,958

26.738 6.967

11.795 687 7.971

569,001 27,375
231,815 35.202 20.079
883.472

392 83 17

46 576 4,837 302

6.902 231

2.501 1.389 870 908 125

5.793

664
570 6.096 2.223
23,240

1.238 1.291 2.254 3.160 210
8,153

(577.661) (28.351)
(210,154) (30.001) (12.371)
(858.538)

(858,538)

(559,963) (27.255)
(214,463) (30.222) (12.105)
(844.008)

40,991 1,635 1.338

43.964 24.755 9.052 1.649 51.565 23,327 33.802 5.552
193.666 97.271 6.961 10.102

308.000

28.302 1.294
23,271 4.939 6.272
64.078

64,005 14,443 9.104
87.552 44.101 31.592 106 35,288 4,958

27.401 6,967 926

238.891
2.230 6,096 6,580
647.381

13,912 687 9.105

10.815 1.411
20,508 8.140 8.357
49.231
Total trading liabilities
Accounts payable and other liabilities
Beneficial interests issued by consolidated VIEs
Long-term debt
Total liabilities measured at fair value on a recurring basis

72 23.792
8.196

13 48 13.894

25,402
136,659

9.120 120 37.686

207,289

a) At June 30, 2017. and December 31, 2016, included total U.S. government-sponsored enterprise obligations of $84.8 billion and $80.6 billion, respectively, which were predominantly mortgage-related.
b) At June 30. 2017, and December 31, 2016, included within trading loans were $15.6 billion and $16.5 billion, respectively, of residential first-lien mortgages, and $3.1 billion and $3.3 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $9.5 billion and $11.0 billion, respectively, and reverse mortgages of $2.0 billion for both periods.
c) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value.less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net realizable value is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 4. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

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e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. The level 3 balances would Oe reduced if netting were applied, including the netting benefit associated with cash collateral.
f) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At June 30. 2017. and December 31. 2016. the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $809 million and 51.0 billion, respectively. Included in these balances at June 30. 2017, and December 31. 2016, were trading assets of $52 million for both periods, and other assets of $757 million and $977 million, respectively.

Transfers between levels for instruments carried at fair value on a recurring basis

For the three and six months ended June 30, 2017 and 2016, there were no individually significant transfers.

All transfers are based on changes in the observability of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 valuations

For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see Note 3 ofJPMorgan Chase's 2016 Annual Report.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level I and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/ instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

in the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3 at June 30, 2017, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range presented; equity correlation and equity-FX and equity-IR correlation inputs were concentrated in the middle of the range; commodity correlation inputs were concentrated towards the lower end of the range; credit correlation inputs were distributed across the range; and the interest rate-foreign exchange ("IR-FX") correlation inputs were concentrated towards the lower end of the range. In addition, the interest rate spread volatility inputs used in estimating fair value were distributed across the range presented; equity volatilities and commodity volatilities were concentrated towards the lower end of the range; and forward commodity prices used in estimating the fair value of commodity derivatives were concentrated in the middle of the range presented. Recovery rate, yield, prepayment speed, conditional default rate and loss severity inputs used in estimating the fair value of credit derivatives were distributed across the range; and credit spreads were concentrated towards the lower end of the range.

91

Level 3 inputs

,!jime.3Q, 2017,(in milliora^except lor ratios and.basis points)..

Fair value
iproduct/lristniment ;;'

" Principal valuation. ■ technique ⁚ jl

Residential mortgage-backed securities % 2.641 Discounted cash flows and loans""

18% 26% 7% 100%

5% 0% 0% 0%

5% 8% 2% 6%

■ cUriobsefv^le;m^ J)J

Yield

Prepayment speed Conditional default rate Loss severity

Commercial mortgage-backed securities and loans'"

Obligations of U.S. states and municipalities

461 Market comparables

1.725 Market comparables

547 Discounted cash flows

83 Market comparables

648 Option pricing

64 Discounted cash flows

(45) Discounted cash flows

(490) Option pricing (196) Discounted cash flows
(2.444) Option pricing

(58) Option pricing

Price
Credit spread Prepayment speed Conditional default rate Loss severity Price
Interest rate spread volatility Interest rate correlation IR-FX correlation Prepayment speed
Credit correlation Credit spread Recovery rate Yield
Prepayment speed Conditional default rate Loss seventy
IR-FX correlation Prepayment speed
Equity volatility Equity correlation Equity-FX correlation Equity-IR correlation
Forward commodity price Commodity volatility Commodity correlation

- $
246bps -20% 2% 30%
$ 0 - $
3% (50)% 60%

4%

35%
6bps 20%
5%
2%
2% 39%
(50)%
- $

15% (5)% (55)% 20%

% 41 22% 15%
103
84
461 bps
260 bps 20% 2% 30% $ 85
169
38% 97% 70% 15%

85% 1.557bps 65% 8% 14% 100% 100%

70%

55% 90% 25% 35%
54 per barrel
50%
97%
MSRs
5,753 Discounted cash flows Refer to Note 14
1,124 Discounted cash flows
Other assets
Credit spread Yield
EBITDA multiple
1,541 Market comparables
Long-term debt, other borrowed funds. 20,105 Option pricing and deposits'"

40bps
8%
6.6x
3% (50)% (50)%
(5)% (55)%
20%

90bps 40% 10.3x

38% 97% 70% 90% 25% 35%

65bps
32%
7.6x

Other level 3 assets and liabilities, net'"

(a)

(b) (c) (d) (e)

(f) (g)

The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.

Includes U.S. government agency securities of $348 million, nonagency securities of $99 million and trading loans of $2.2 billion.

Includes U.S. government agency securities of $17 million, nonagency securities of $65 million, trading loans of $570 million and non-trading loans of $304 million. Includes trading loans of $1.7 billion and non-trading loans of $1 million.

Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

Includes level 3 assets and liabilities that are insignificant both individually and in aggregate.

Price is a significant unobservable input for certain instruments. When quoted market prices are not readily available, reliance is generally placed on price-based internal valuation techniques. The price input is expressed assuming a par value of $100.

Changes in and ranges of unobservable inputs

For a discussion of the impact on fair value of changes in unobservable inputs and the relationships between unobservable inputs as well as a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions see Note 3 of JPMorgan Chase's 2016 Annual Report.

Changes in level 3 recurring fair value measurements The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm , within level 3 of the fair value hierarchy for the three and six months ended June 30, 2017 and 2016. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall

fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

93

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*[Three months elided ;y .:; f •' !' June:30:',20i7/v.)*j-<,,i ^(in.millibns)"; ^rf^/>*

Assets:

Trading assets: Debt instruments: Mortgage-backed securities: U.S. government agencies Residential - nonagency Commercial - nonagency

(11) (1) (1)

realized/':W^ j,. ^: s?'*

'['unrealized '■■"?. . -'.'^"-av f\, " *

" "gains/ V'£-: - ".'■" ■ *?='-.'

;'^t (losses)-* /Sales*..';

82 $ (54) 31 (3) 10 (6)

ri',:'**;->'" Transfers, transfers .

, ' J '* . ^ ifftd; V (OUt 0f)~„

20 46 30

(6) (5) (11)

■V, Settlements'" " level! 3*1" level 3™

(19) $ (5) (2)

, Faihvalue:at • 'june30,,2017.;

265 98 65

• ;v • ■■;' ■<<■'-A ."."Change.in'_'^4

, unrealized gains/'*!

?v(losses)relatedjJ ^ .tofinancial !u

„ instruments.held'f

i.atJurie 30,,20i7f

(14) (4) (1)

Total mortgage-backed securities 433

Obligations of U.S. states and municipalities 668

Non-U.S. government debt securities ' 47

Corporate debt securities 738

6,719 271 763

Loans 4,588

Asset-backed securities 245

Total debt instruments Equity securities Other

(13)

3 2 68 8

72 21 43
123
(63)

102 (95)

74 (38)

729 (323)

II (30)

1,048 (549) 57 (41) 3 (7)

(26)

(254) (390) (25)

(695)

(65)

1

27 122 6

252 1 2

(22)

(21) (88) (306) (132)

(569) (25) (8)

528

681

37 461 4.488 83

6.278 284 731

(19)

3

2 1 83 6

76 10 31

Total trading assets - debt and equity instruments

Net derivative receivables.-"1

Interest rate	1,009	37
Credit	17	(48)
Foreign exchange	(1,490)	95
Equity	(1.896)	(35)
Commodity	(56)	(22)

21 (30)
1 (1)
3 (2)
149 (83)

(348) 30
(20) 6
656 12
(504) (108)
23 (2)

(7)

40
33 (1)

712 (45) (686) (2.444) (58)

(90)
(37)
101
(38)
(32)

Total net derivative receivables

Available-for-sale securities: Asset-backed securities Other

622 1

547 1

Total available-for-sale securities

Loans

Mortgage servicing rights Other assets

404 6.079 2.077
18 (200) 193

154 28

(67) (78)
(117) (213) (286)
305 5.753 1.934
13 (200) 120

'..' I' iftif- yaj"e measurements. using"significa'M

Elurie-30; 2017 ;'(in millions)-

Liabilities:'"

Deposits

Federal funds purchased and securities loaned or sold under repurchase agreements

Other borrowed funds

Trading liabilities - debt and equity instruments

Accounts payable and other liabilities

Beneficial interests issued by consolidated VIEs

Long-term debt

■; v Total ; .v . ■■■■■•. --w-■■■
j .realized/, / ' ~ " " - ■ ■
: Fair. ...unrealized";-.</'.. \.-- J'Z- y"' ." " Jr. \i- V Transfers Transfers
valiieat .'. V '(gains)/ '.,;■., ' '\ -.'J■'■ 1- "* V'. ,'v-ihtO'." ! (out of)
$ 30
$ 292 S
(31)
April i, 2017: flosses- / Purchaser•.|,Sales^Jlssuantes-..Settlem . .level 3%i

% (293) $ 2,131
(657)

(42) (4)

23 1
46

(1)

(7) (1) (44)

(6) (2.274)

51

15.895
207
(152)

1,314 36 10 1

16.660
,'.,; Change in , :■
',■■'■ ^unrealized' f.
(gains)/ldsses-
., ■ related V i . -to financial] instruments held?!
;at Junyo.- 2017jj

27

53 10

94

Assets:

Federal funds sold and securities purchased under resale agreements

Trading assets:

Debt instruments:

Mortgage-backed securities:

U.S. government agencies

Residential - nonagency

Commercial - nonagency

4 $

650 (24) 186 (1) 195 (1)

1 (SO) 143 (148) 15 (23)

(28) (6)

6 30 8

(4)

(82) (4) (164)

473 200 30

(27) (1) (2)

Total mortgage-backed securities

Obligations of U.S. states and municipalities

Non-U.S. government debt securities

Corporate debt securities

Loans

Asset-backed securities

Total debt instruments Equity securities Other

(26)

620

40 (8)

654 (54)

6,776 (217)

1.190 16

10,311 (285) 279 (9) 723 (37)

159 (221) (41)

25 (19) 80 (89) 421 (733) 255 (334)

940 (1,437) 2 (24) 169 (144)

(34) (32)

(68) (338) (42)

(514) (3) (29)

16 240 37

337 1 3

(250)

(1) (23) (133) (163)

(570)

(IS)

703

551

37 516 6.016 959

8.782 246 670

(30)

(5) (50) (234) 4

(311) (6) (36)

Total trading assets - debt and equity instruments

Net derivative receivables:"1 Interest rate Credit

Foreign exchange

Equity

Commodity

(331)

11.313

846 334

402 (202)

(1.032) 53

(2,055) (12)

(952) 235

1,111 (1.605)

62

58

72

(12) (1) (103) (215) 18

(546)

(180) 48 (158) (5) (29)

341

(1) 37 (43) 252 3

(585)

58 (5) 20 71 6

9.698

1,107 279 (1.205) (1.892) (719)

(353)

190 (76) 75 9 291

Total net derivative receivables

Available-for-sale securities.-Asset-backed securities Other

(2.791)

809 1

(2.430)

809 1

Total available-for-sale securities

Loans

Mortgage servicing rights Other assets

810

1,009 (36) 5.658 (457) 2,351 114

184 113 457

(3) (422)

(7)

(372) (239) (131)

810

785 5,072 2,369

(16) (457) 53 1

Three, mbntlisicnded: .'
fJune 30,'20i6' i(l^nBfj1kSj^^/;)y ^

Liabilities:"" Deposits

Federal funds purchased and securities loaned or sold under repurchase agreements
Other borrowed funds

Trading liabilities - debt and equity instruments

Accounts payable and other liabilities

Beneficial interests issued by consolidated VIEs

Long-term debt
-'-nonslirs," -rtahsfers:-M)

"total":. ;;'V'-'-;-,- :..:•",/ '■'-.■^v.',:. : :'.;Y-.-'r ■■■ . . Fair. realized/ ' .."t><;. -'■ '. ■ . „.«■
'yalueatj unrealized y *t-V»' i,". »••<**
••>« April.l.X->..r,(gains)/ "^fr-V'**;^. i?X£ % •'.n""^*

317 $
t (192)
2.409

907

57

15

584 13.147
' .'^'r;20l6 * , V.lrisses, J--^ Purchasesi ^■Saies;^ issuances; ;Settlemen^

2,419 $ 33

(4) (17)

6

568

(31) (3)

42 3
(168) $

(2) (170)

(12)

649 12,587

(30) 10 (47) 10

(1)

2.714
(777)

(35) (1,498)

95

i V, i-:-Zv ■■

fsix months ended . j:june 3Q:\20i7. - .'■■ f.firimillions) \, ;,.,

■■,■*'/'

Total
'^ ■ ^-^Fair^^ .realized/' ,';::«'..' «;:^« '-,' ^v^^sv^i'ti « '
valueat. unrealized .J:'..'" .tttvp -'• ;r*iV5% "4 '"»*Trans(iBSv
'. .;Janua'ry'-i: ■•>£. gains/' '^v.i.'■'■'*•:-■?'■'.■':■■.!:• j*. , ^■'-.■'"•'t;", • .- \, into'V' r ' ^ ^017^:.^'(losses)' f, ■ Purchases!'SaTes--r';^^'^^iSettlements"^levels!"!'

Assets:

(35) $ 27 (9) 61 (5) 60

392 83 17

(7) 8 2

161 $ (151) 36 (20) 17 (14)
148

(49) (5)

214 (185)

95 (70)

(178) (146) 1.491 (1.067) 109 (168)

Trading assets: Debt instruments: Mortgage-backed securities: U.S. government agencies Residential - nonagency Commercial - nonagency

Total mortgage-backed securities 4923

Obligations of U.S. states

174 497

27 60 318 14

and municipalities 64912

Non-U.S. government debt

(376) (765) (36)

securities 463

Corporate debt securities 576(7)

2,580 (1.814) 113 (47) 22 (7)

567 2 10

6.902 231 761

211 34 65

Loans 4.837 178

Asset-backed securities 30222
(1.231)
(112)

Total debt instruments Equity securities Other

- -" •■ ■ ■• . ,.,t..- ■ ■ A ■ :$.:(
." ' :;:■■■ !.+ »J

"< s:':v.Ghange..in-/;J
*v'.-1" , -.■?^unr'ealized'gaihs/'j
• ■";•,'. /"i ■*lf(lbsses)related J
'..'. '',"'* ' ' to financial ,j!
; Fair value at . instruments heldli

365 98 65

(16) 1

(1)
June 30; 2017 • at June 30.2017

(22) $

(61)
(16)

11

3 1
98
7
(12)

(95)
528

681
104 20 49

37 461 4,488 83

6.278 284 731

Total trading assets - debt and equity instruments

Net derivative receivables:[1]

interest rate	1.263	81
Credit	98	(94)
Foreign exchange	(1.384)	70
Equity	(2,252)	34
Commodity	(85)	(4)

37	(53)
1	(3)
4	(4)
485	(128)

(651)	34
(62)	17
565	23
(528)	(181)
25	4

1
(2) 40 126 2

712 (45) (686) (2,444) (58)

(151) (50)
60 (37)
30

Total net derivative receivables

Available-for-sale securities: Asset-backed securities Other

663 1

547

1

Total available-for-sale securities

Loans

Mortgage servicing rights

570 6.096 2.223
24 (157) 230

371 32

(138) (155)
(289) (419) (396)
305 5.753 1.934
16 (157) 132

[Six monthsended Dune 30. 2017 '" ; i,(in millions): .
Liabilities:'"

Deposits

Federal funds purchased and securities loaned or sold under repurchase agreements
Other borrowed funds

Trading liabilities - debt and equity instruments

Accounts payable and other liabilities

Beneficial interests issued by consolidated VIEs
Long-term debt
•tFiairyalue measured ;

Transfers into L

losses ■•: ' Purchases' Sales tsaiante^Settllmeflts!'' .\evey3f1' <file:///evey3f1'>*

- $ 601 $

47 (1)
40

3

(111) $

1.390

(8) (1) (44)

(1.242) 1

3

633

(2)

88
7.583

(6) (5,085)

Fain value at'" June 30;'. 2017'

$ (482) $ 2.131

(55) (6)
(453)

1,314 36 10 1

16,660
-' • '^i '■'. *■ i '. Change iiv '5 unrealized t l
<. '■ (ijTainsl/lbsse'S:, (* .related .'■';!,;
.'to financial ■"
'^instruments held ';
'f 'at jurie-30:.20l7 ,

432

96

i Six months ended" |:ju'ne':30,2016 . :-.(in millions)- ..

Fair value at 'JUMT-30'20161
;-;thange:ih1..-'.j.>| ; uri'rcalized'gaihs/i?'! '"."(losses) related .•.*i.:.'itb financial" -.'j ^instrumentsheld; 4
tat June.-30; 2016'J;

Assets:

Federal funds sold and securities purchased under resale agreements

Trading assets:

(74) (1) (6)

715 194 115

Debt instruments:

Mortgage-backed securities:

U.S. government agencies

Residential - nonagency

Commercial - nonagency

Total mortgage-backed securities 1.024(81)

Obligations of U.S. states and municipalities 6519

Non-U.S. government debt securities 742

Corporate debt securities 736(32)

10.921 265 744

(273) (3) (46)

Loans 6.604(188)

Asset-backed securities 1.832 17

Total debt instruments Equity securities Other

371

129 (208) 177 (184) 65 (28)

(420)

36 (107)

29 (51)

159 (144)

865 (1.144)

432 (470)

1.892 (2.336) 33 (33) 353 (287)

(4)

4 55

(58) 87 (118)

(11) 44 (19)

(69)

266

135 (251)

(388)

(17) (133) (242) (176)

(38)

(956) (1) (84)

(125) 55 (642) 763 (917) 241

(1.791) 1,325 (22) 7 (35) 25

473 200 30

703

551

37 516 6,016 959

8.782 246 670

(78) (6) (2)

(86) 9

(14) (1) (195) 3

(284) 17 (12)

Total trading assets - debt and equity instruments

Net derivative receivables:" Interest rate Credit

Foreign exchange

Equity

Commodity

11.930

876 540

549 (448)

(725) (194)

(1,514) (364)

(935) 227

2.278 (2.656)

106 (20) (2)

58 (118) 142 (322) 18

42 15 19 55 8

5

48

(45) s

38 3

(1.848) 1.357 (1,041)

(442) 117

(200) 73 (40)

9,698

1.107 279 (1.205) (1.892) (719)

(279)

153 (402) (72) (3) 230

Total net derivative receivables

Available-for-sale securities: Asset-backed securities Other

823 1

809 1

Total available-for-sale securities

Loans

Mortgage servicing rights Other assets
824

(1) 1

1.518 (14) 6,608 (1,209) 111 2,401 146 10

184 220 471

(67) (438)

(13)

(590) (480) (211)

810

785 5,072 2,369

(14)

(16) (1,209) (22)

i Six months ended - > ■'■'

ijune 30; 2016 '. "V.ij
i(in^nillions).'*_■ _/_(_

Liabilities:""
Deposits

Federal funds purchased and securities loaned or sold under repurchase agreements

Other borrowed funds

Trading liabilities - debt and equity instruments

Accounts payable and other liabilities

Beneficial interests issued by consolidated VIEs

Long-term debt
: Transfers. Transfers. intbf1 ' o (but of)' *

. Change in :.A unrealized.(gains)/.; losses'related; j .-to financial. .-H*. instruments heldK

Fair value at
483 $
losses' '}* ^purchases,-. '.SalMti^. fouances ^Setile*rantf»,'. Ieyigt^>^'lg^i?*j^*: '. June 30; 2016 at.Jun'e-3.0,2016?*?

$ (422) $ 2,409

6 50

(4) (29)

(5)

(156) ' (7) '

907

57

15

584 13.147
(677) !

(2) (369)

(15)

(35) ' 1.154

(22) ' 392 '

143 4.875

(4)

259 (1.097)

(86) (2,895)

a) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 13% and 12% at June 30. 2017 and December 31. 2016. respectively.
c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
d) Realized gains/dosses) on AFS securities, as well as other-than-temporary impairment COTTI") losses that are recorded in earnings, are reported in securities gains. Unrealized gams/dosses) are reported in OCI. Realized gams/dosses) and foreign exchange hedge accounting adjustments recorded in income on AFS securities were zero for the three and six months ended June 30, 2017 and 2016, respectively. Unrealized gams/Oosses) recorded on AFS securities in OCI were $2 million and $7 million for the three months ended June 30. 2017 and 2016, respectively and $12 million and $(2) million for the six months ended June 30,2017 and 2016, respectively.
e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
f) Loan originations are included in purchases.
g) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, deconsolidation associated with beneficial interests in VIEs and other items.
h) All transfers into and/or out of level 3 are based on changes in the observability of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 analysis

Consolidated balance sheets changes Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 0.8% of total Firm assets at June 30, 2017. The following describes significant changes to level 3 assets since December 31, 2016, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 99.

Three months ended June 30, 2017 Level 3 assets were $20.4 billion at June 30, 2017, reflecting a decrease of $1.4 billion from March 31, 2017 with no movements that were individually significant.

Six months ended June 30. 2017

Level 3 assets at June 30, 2017 decreased by $2.8 billion from December 31, 2016, largely due to the following:

- $1.8 billion decrease in trading assets driven by lower levels of interest rate and foreign exchange derivative receivables, largely due to settlements and transfers from level 3 to level 2 as a result of increased observability of certain valuation inputs.

Gains and losses ' The following describes significant components of total reali2ed/uhrealized gains/dosses) for instruments measured at fair value on a recurring basis for the periods indicated. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 94-98.

Three months ended June 30, 2017

■ $176 million of net gains on assets and $282 million of net losses on liabilities, none of which were individually significant.

Three months ended June 30, 2016

- $295 million of net losses on assets and $78 million of net gains on liabilities, none of which were individually significant.

Six months ended June 30, 2017

- $506 million of net gains on assets and $688 million of net losses on liabilities, none of which were individually significant.

Six months ended June 30, 2016

- $1.6 billion of net losses on assets largely driven by $1.2 billion loss on MSRs. For further details see Note 14.

Credit and funding adjustments - derivatives The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The DVA and FVA reported below include the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

T ' ' Tfiree. months ended"v^six rfonttisindea?9				"r---j:'--/; June 30, ;'Julie 30;_ • ^jj
•(jh iTiiiiions) ^;,_xZ:-J^ZMM.■Z?9ih r.Ji9\?I :,,MWi				
Credit and funding adjustments:				
Derivatives CVA	$ 249	$ (168)	$ 470	$ (756)
Derivatives DVA and FVA	(60)	43	(67)	(123)

For further information about both credit and funding adjustments, as well as information about valuation adjustments on fair value option elected liabilities, see Note 3 ofJPMorgan Chase's 2016 Annual Report.

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Assets and liabilities measured at fair value on a nonrecurring basis

The following table presents the assets and liabilities reported on a nonrecurring basis at fair value as of June 30, 2017 and 2016, by major product category and fair value hierarchy.

f; ~'" • , '^•■'.'^.y/.'i-'" '"?r v'-'- :".■'■ ' R:8y"..':	Fair value hierarchY-v:I'. ".71			;'. "-"v';)
1 iurie;3.0,2017 (in t^on^.„ij7c^:.. Y7\/Z■'".j-^ci. '.'...■:	'.. level I	Level,2. "...	, Level'3;	':i^$i^3\ue$
Loans	$ -	$ 292	$ 430 [1]	$ 722
Other assets	-	10	245	255
Total assets measured at fair value on a nonrecurring basis	-	302	675 [a]	977
Accounts payable and other liabilities	-	1	2	3
Total liabilities measured at fair value on a nonrecurring basis	$ -	$ 1	$ 2	$ 3

f'; • ■' ■ „ ;	Fair value.tieraahy. .		.*,'.,.>"■' .,■ ".■'"*'■	
jjune.30, 2016 .(in millions) . „,,-, ,', ... >; ^ ■, ; .	Level 1^ ■ ~Z	Level,2 .	Leveij.;;	IjTotallj^yalij^
Loans	$ -	$ 280	$ 366	$ 646
Other assets	-	11	93	104
Total assets measured at fair value on a nonrecurring basis	-	291	459	750
Accounts payable and other liabilities	-	2	7	9
Total liabilities measured at fair value on a nonrecurring basis	$ -	$ 2	$ 7	$ 9

(a) Of the $675 million in level 3 assets measured at fair value on a nonrecurring basis as of June 30. 2017, $146 million related to residential real estate loans carried at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3 as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 20% to 48% with a weighted average of 29%.

Nonrecurring fair value changes The following table presents the total change in value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the three and six months ended June 30, 2017 and 2016, related to financial instruments held at those dates.

-V Three months ended'" Six months; ended'") . . .. . June' 30, '. * .;June.30i '■ " *l				
, . ..•2017, ^_20i6^ , J0i-7Fj-.:'.'.:."-ZQ^j				
Loans	$ (60)	$ (53)	$ (109)	$ (103)
Other Assets	(17)	(18)	(44)	(22)
Accounts payable and other liabilities	W	(5)	(1)	(5)
Total nonrecurring fair value gains/dosses)	$ (78)	$ (76)	$(154)	$ (130)

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14 of JPMorgan Chase's 2016 Annual Report.

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Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at June 30, 2017, and December 31, 2016, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see Note 3 of JPMorgan Chase's 2016 Annual Report.

December 31,2016 :

Carrying" .value

Total ., estimated fair value

Carrying value,.
Estimated.fair value'hiefarchy ' .<.'.}
'.v"r Total j
, '" , ■ ',... '. " *estimated* I

Financial assets

Cash and due from banks $ 21.8

Deposits with banks 427.4

Accrued interest and accounts
' receivable 64-°

Federal funds sold and securities purchased under resale agreements 200.5

Securities borrowed 89.1

Securities, held-to-maturity 47.8

Loans, net of allowance for loan losses[18]' 893.4

Other 64.7

21.8 426.0

1.4 62.7

200.5 89.1 48.8

30.8 54.6

0.2

862.1 14.8

21.8 427.4
62.9

200.5 89.1 48.8

892.9 69.4

23.9 365.8

52.3

208.5 96.4 50.2

878.8 71.4

23.9 362.0

0.1

3.8 52.2

208.3 96.4 50.9

24.1 60.8

0.1

0.2

851.0 14.3

23.9 365.8

52.3

208.5 96.4 50.9

875.1 75.2

Financial liabilities

Deposits *$ 1,421.7 $*

Federal funds purchased and securities loaned or sold under repurchase agreements 164.9

Commercial paper 22.2

Other borrowed funds 22.4

Accounts payable and other liabilities 150.5

Beneficial interests issued by consolidated vies 30.8

Long-term debt and junior subordinated deferrable interest debentures 249.5

$ 1,421.8 $

164.9 22.2 22.4

146.9

30.8

252.5

165.0 11.7 13.6

148.0

38.9

257.5

$ 1,421.8 $ 1.361.3 $

164.9 22.2 22.4

149.9

30.8

255.0

$ 1.361.3 $

165.0 11.7 13.6

144.8

38.9

260.0

$ 1.361.3

165.0 11.7 13.6

148.2

38.9

262.0

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market'spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 150-

153 of JPMorgan Chase's 2016 Annual Report.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets, nor are they actively traded. The carrying value of the wholesale allowance for lending-related commitments and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

	juried, 2017					December 3Y2016				
		Estimated fair value hierarchy					Estimated fair-value hierarchy			
(in billions)	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	$ 1.1	$ -	$ -	$ 1.6	$ 1.6	$ 1.1	$ -	$ -	$ 2.1	$ 2.1

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 151 of JPMorgan Chase's 2016 Annual Report.

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Note 3 - Fair value option

For a discussion of the primary financial instruments for which the fair value option was elected, including the basis for those elections and the determination of instrument-specific credit risk, where relevant, see Note 4 of JPMorgan Chase's 2016 Annual Report.

Changes in fair value under the fair value option election

The following tables present the changes in fair value included in the Consolidated statements of income for the three and six months ended June 30, 2017 and 2016, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

Three months ended June 30.

2017

(in millions)

Federal funds sold and securities purchased under resale agreements

Securities borrowed

Trading assets:

Debt and equity instruments, excluding loans

Loans reported as trading assets:

Changes in instrument-specific credit risk

Other changes in fair value

Loans:

Changes in instrument-specific credit risk

Other changes in fair value Other assets Deposits™

Federal funds purchased and securities loaned or sold under repurchase agreements

Other borrowed funds'"

Trading liabilities

Beneficial interests issued by consolidated VIEs Long-term debt'[1]"

Total changes in 1

(12) 13

336

78 272

(12) $ -

13

334 2

69 9

43 229
(141)
Principal . ■■- /Allother Total changes ih.fair. ': : Principal:". •; All'tater-', fair value <$} iransarttoris^ .' >.ihcbmev, jralue/ecpfded.. .transanjons ^ J..j-ij»B0§fi^ vCecpjrrJed^.^ j

(140)

34 16 ,cl 50
3
(16) 1
1 3
(86)

(3) 43
4

(13) (86)

(3) 43
(3) 104 (226)

(3) (529) (2) 16 (600)
70 206 '" 276
102

(3) 2
(226)

(3).
(170)
(170)

(529) (2) 16

(600)

101

fc-' +'j»«S>".' .■ Si. ,-V'-: .j,*^C tw-i""-.i'V '•■ f " * fotalxhange's'ihr,;; ; 0- ". °i • '-?">/"i- "••"j,' 1* .toul chahgesiim)

(33) $ -90

68 $ -1

(113)

98 14 '°»

186 523 1cJ

(33) 90

697

258 429

(1) 4

(15) (245)

2

(431) (1)

(923)

68 1

(113)

112 709

13 4 96 (569)

(20) (1) 2¯23 (918)

e*,v" v" "«.' ... '■*"■<' v ' „'», i;7'.'Si, '.'<.. Jjt-" 4.f^^Pfiiid^»->^iMI other-., V, fair value' v~» ; '. I^i«i|M^^•^>.A!f^ef^^.^', • fejr^tue;'.%$ jjin'hiiilions) -■■■> ■ -V- .- ■ 5J!¥i* ::7". fashions'£ incdme;;r-^,-re^^ recprdedf'^li

Federal funds sold and securities purchased under resale agreements

Securities borrowed

2 '«

15 10 352 '°

695

243 77

(1) 1 7

(245) 2

(431) (1)

(923)

Trading assets:

Debt and equity instruments, excluding loans

Loans reported as trading assets:

Changes in instrument-specific credit risk

13 4 14

(569)

Other changes in fair value

Loans:

3

(22) «"

Changes in instrument-specific credit risk

82

(20) (1) 2 23 (918)

Other changes in fair value Other assets Deposits'"

Federal funds purchased and securities loaned or sold under repurchase agreements

Other borrowed funds'"

Trading liabilities

Beneficial interests issued by consolidated VIEs Long-term debt'""'

a) Unrealized gains/dosses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected is recorded in OCI, while realized gains/dosses) are recorded in principal transactions revenue. Realized gains/dosses) due to instrument-specific credit risk recorded in principal transaction revenue were not material for the three and six months ended June 30, 2017 and 2016, respectively.
b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/dosses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.
c) Reported in mortgage fees and related income.
d) Reported in other income.

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Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of June 30, 2017, and December 31, 2016, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

December 31,-2016'

I(m millions)

Loans[1"1]

Nonaccrual loans

Loans reported as trading assets Loans

Subtotal

All other performing loans

Loans reported as trading assets Loans

Contractual principal -outstanding

3,933 39

3,972

36,505 1,995

■ , Fair value ■oover/- . ,:.(under) . .contractual . principal Fair, value outstanding

1,193 $
1,193

34,992 1,978

(2,740) $ (39)

(2,779)

(1,513) (17)

Fair value ;
over/ ■'■
(under),.
". ■ contractual.
■ *■'. principal^ Fair value outstanding'

748 $ (2.590)

748

33,054 2.228

(2.590)

(2,423) (31)

Total loans

Long-term debt

Principal-protected debt Nonprincipal-protected debt""

$ 36.030 $ (5.044)

$ 42,472 $ 38,163 $ (4,309) $ 41,074

25,339[(c]	$ 22,502	$ (2,837)	$ 21,602[10]	$ 19,195	$ (2,407)
NA	20,982	NA	NA	18.491	NA

Total long-term debt

Long-term beneficial interests

Nonprincipal-protected debt

Total long-term beneficial interests

a) There were no performing loans that were ninety days or more past due as of June 30, 2017, and December 31, 2016, respectively.
b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.
c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At June 30, 2017, and December 31, 2016, the contractual amount of lending-related commitments for which the fair value option was elected was $4.5 billion and $4.6 billion, with a corresponding fair value of $(100) million and $(118) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29 of JPMorgan Chase's 2016 Annual Report, and Note 19 of this Form 10-Q.

Structured note products by balance sheet classification and risk component

The following table presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk type.

June 30,2017

j (in millions)!

Risk exposure

Interest rate Credit

Foreign exchange

Equity

Commodity

■; •." . Other ■■ . : Long-term borrowed

_ .debt,;ti:"Junds; Peppste" ^s.T6tal;;

$ 20,170 $ 107 $ 5,875 $ 26,152 $ 16,296 $

3,546 80.-.3,626 3,267

2,491 17262,669 2.365

16,351 7,488 5,99529,834 14,831

425 273,5443,996 488

Deposits. ; Total!

184 $ 4,296$ 20,776

225 -3,492

135 62.506

8,234 5,48128,546

37 1.811 2,336

$ 42,983 $ 7,874 $ 15,420 $ 66,277 $ 37,247 $ 8.815 $ 11,594 $ 57,656

103

Note 4 - Derivative instruments

JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. For a further discussion of the Firm's use of and accounting policies regarding derivative instruments, see Note 6 of JPMorgan Chase's 2016 Annual Report.

The Firm's disclosures are based on the accounting treatment and purpose of these derivatives. A limited number of the Firm's derivatives are designated in hedge

accounting relationships and are disclosed according to the type of hedge (fair value hedge, cash flow hedge, or net investment hedge). Derivatives not designated in hedge accounting relationships include certain derivatives that are used to manage certain risks associated with specified assets or liabilities ("specified risk management" positions) as well as derivatives used in the Firm's market-making businesses or for other purposes.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Use of Derivative

Type of privative

Manage specifically identified risk exposures in qualifying hedge accounting relationships:

° Interest rate Hedge fixed rate assets and liabilities

° interest rate Hedge floating-rate assets and liabilities

° Foreign exchange Hedge foreign currency-denominated assets and liabilities

" Foreign exchange Hedge forecasted revenue and expense

° Foreign exchange Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities

• Commodity Hedge commodity inventory

Designation'^^

Fair value hedge Cash flow hedge Fair value hedge Cash flow hedge Net investment hedge

Fair value hedge
•■ Affected';. "„ segment brunit,

Corporate Corporate Corporate Corporate Corporate

CIB
;10rQpage: :'reference'-

110 111 110 111 112

110

Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:

• Interest rate Manage the risk of the mortgage pipeline, warehouse loans and MSRS

• Credit Manage the credit risk of wholesale lending exposures

»Commodity Manage the risk of certain commodities-related contracts and investments

° Interest rate and Manage the risk of certain other specified assets and liabilities foreign exchange

Specified risk management	CCB	112
Specified risk management	CIB	112
Specified risk management	CIB	112
Specified risk management	Corporate	112

Market-making derivatives and other activities:

° Various Market-making and related risk management

• Various other derivatives

Market-making and other Market-making and other

CIB

CIB, Corporate

112 112

104

Notional amount of derivative contracts The following table summarizes the notional amount of derivative contracts outstanding as of June 30, 2017, and December 31, 2016.

Nbtibnararhouhts!?

;(in billions)

Interest rate contracts

Swaps

Futures and forwards Written options Purchased options

22,112 5,805 3,610 4,038

June 30, -December 3t:l 2017.; ,2016j

22,000 5,289 3,091 3,482

Total interest rate contracts

Credit derivatives'"

Foreign exchange contracts

Cross-currency swaps Spot, futures and forwards Written options Purchased options

3,829 6,374 824 820

3.359 5.341 734 721

Total foreign exchange contracts

Equity contracts

Swaps

Futures and forwards Written options Purchased options

11,847

301 89 543 468

10,155

258 59 417 345

Total equity contracts

Commodity contracts

Swaps

Spot, futures and forwards Written options Purchased options

105 145 82 87

102 130 83 94

Total commodity contracts

Total derivative notional amounts $ 51,051 $ 47,537

a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on page 113.
b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of June 30, 2017, and December 31, 2016, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

■fa)

Free-standing derivative receivables and payables

! June 30,2017 I (in millions)
Gross derivative receivables

•', NOt ; ' ;; Total
. designated, .Designated . derivative ■ as hedges ; as,hedges■ ',^ receivables;

, ' 'Net . '■' ■;'
,-derivative ..receivables""
Gross,derivative payables

;-. Not ..,- ' Total designated "Designated derivative as hedges -.;as hedges, . payables/f^;
; ;; , <

? Net j derivative- i ^payables'J'J

Trading assets and liabilities

Interest rate

Credit

Foreign exchange

Equity

Commodity

$ 519,565 25,898 174,034 37,546 14,114

3,872 $ 523,437 25,898
' 763 174,797 37,546 20 14,134

26,912 1,014
16,662 6,273 5,645

$ 483,494 26,123 176,681 43.077 17,208

2,096 $ 485,590 26,123
1,391 178,072 43,077 114 17,322

8,206 1,625 14,021 9,356 8,587
Total fair value of trading assets and liabilities $ 771,157 $ 4,655 $ 775,812

Gross "derivative receivables*

^December 31,2016-:(ih millions)
Trading assets and liabilities

Interest rate
Credit
Foreign exchange
Equity
Commodity
601.557 29,645
232,137 34,940 18.505
4,406 $ 605,963 29.645
1,289 233,426 34.940 137 18,642
28.302$ 567.894
1.294 28,666
23,271 233.823
4.939 38,362
6,272 20,283
2.884 $ 570,778 28,666
1.148 234,971 38,362 179 20,462
Net . .. ■'ti'jdemativevi .·rf»·payables·.ʷ,j

$ 10,815 1,411 20,508 8.140 8,357

$ 5,832 $ 922,616 $ 64,078 $ 889,028 $ 4.211 $ 893,239 $ 49,231

a) Balances exclude structured notes for which the fair value option has been elected. See Note 3 for further information.
b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting

The following tables present, as of June 30, 2017, and December 31, 2016, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables below.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of non-cash financial instruments (generally (J.S. government and agency securities and other G7 government bonds) and cash collateral held at third party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables below, up to the fair value exposure amount.
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables below; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables below.

•' December 31.20167 T

i(in millions)

U.S. GAAP nettable derivative receivables Interest rate contracts:

Over-the-counter ("OTC")

OTC-cleared

Exchange-traded""

;" 'Grass"- /■ •" derivative' ■ -receivables [1]
Amouiitsnetted.. . •,,

Gross '.on the . Net .

.'derivative .∴ Consolidated >. v derivative *
receivables ' balance sheets ■ receivables

$ 320,828 $ (299,119) $ 21,709 $ 365.227 $ (342,173)

197,359 (197,297) 62 235,399 (235,261)

167 (108) 59 241 (227)

Total interest rate contracts

Credit contracts:

OTC

OTC-cleared

18,169 7,088

(17,862) (7,023)

307 65

23,130 5,746

(22,612) (5,739)

518

7

Total credit contracts

Foreign exchange contracts:

OTC

OTC-cleared Exchange-traded[1111]
372
28,876
(28,351)
25,257
(24,885)

169,826 (156,701) 13,125 226,271 (208,962)

1,507 (1,424) 83 1.238 (1.165)

95 (9) 86 104 (27)

525

17,309 73 77

Total foreign exchange contracts

Equity contracts:

OTC

OTC-cleared Exchange-traded[131]

Total equity contracts

Commodity contracts:

OTC

OTC-cleared Exchange-traded""

Total commodity contracts

(210,154)

(20,570) (9,431)

(30,001)

(5.605)

(6,766)

(12,371)

17,459

298

2.008

2.306

5,966 28

5,994

Derivative receivables with appropriate legal opinion

Derivative receivables where an appropriate legal opinion has not been either sought or obtained

Total derivative receivables recognized on the Consolidated balance sheets

Collateral not nettable on the Consolidated balance sheets"1"11

$ 56,506 (15,383)

64,078 (18,638)

Net amounts

107

?.•.'*'*"••••'.. /'."•'•

MB

;""*. jj-- ' ° S'■ 2'-" .

fftfiirniliiohs)'

U.S. GAAP nettable derivative payables interest rate contracts:

OTC

OTC-cleared Exchange-traded'31

Junei3o; 2017^_

. v..''..:.

December 3li 2016 ■'

'.Gross'. ,,," •. derivative: 'J,"payables.;

Amounts'hetted;

on the Y«< ■'• ^Consolidated! . .balance sheets' •

290,398 $ (284,262) $ 6,136 $ 338,502 $ (329,325)

193,154 (193,011) 143 230,464 (230.463)

127 (111) 16 196 (175)

Total interest rate contracts

Credit contracts:

OTC

OTC-cleared

18,293 6,966

483,679 (477,384)

(17,532) (6,966)

569,162

22.366 5,641

(559,963)

(21,614) (5,641)

Total credit contracts

Foreign exchange contracts:

OTC

OTC-cleared Exchange-traded'31

25,259

(24,498)

172,444 (162,674) 1,370 (1,369) 87 (8)

761

9,770 1 79

28,007

228,300 1,158 328

(27,255)

(213,296) (1.158) (9)

Total foreign exchange contracts

Equity contracts:

OTC

OTC-cleared Exchange-traded'11

Total equity contracts

commodity contracts:

OTC

OTC-cleared Exchange-traded'31

Total commodity contracts

(30,222)

(5,252) (6,853)

(12,105)

Derivative payables with appropriate legal opinions

Derivative payables where an appropriate legal opinion has not been either sought or obtained

Total derivative payables recognized on the Consolidated balance sheets

Collateral not nettable on the Consolidated balance sheets"''' 1'3)

$ 41,795 $ (5,701)

$ 49,231 (8,925)

Net amounts

a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
b) Net derivatives receivable included cash collateral netted of $59.7 billion and $71.9 billion at June 30, 2017, and December 31, 2016, respectively. Net derivatives payable included cash collateral netted of $48.8 billion and $57.3 billion related to OTC and OTC-cleared derivatives at June 30, 2017, and December 31, 2016, respectively.
c) Excludes all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

d) Represents liquid security collateral as well as cash collateral held at third party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.
e) Derivative payables collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.

Liquidity risk and credit-related contingent features

For a more detailed discussion of liquidity risk and credit-related contingent features related to the Firm's derivative contracts, see Note 6 of JPMorgan Chase's 2016 Annual Report.

The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at June 30, 2017, and December 31, 2016.

OTC and OTC-cleared derivative payables containing downgrade triggers

.(in rnjjljqns). ; ; :..	:. X^^ipiiK-7silL M[1]**	
Aggregate fair value of net derivative payables	$ 13,737	$ 21.550
Collateral posted	11,219	19.383

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at June 30, 2017, and December 31, 2016, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral, (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payments requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

(in millions)	„, .. ^. ju-ne 30> 2oi7		Dece'mbep3l/2pl6- t: ^	
.'l".	'•. Single-notch	.., Two-notch	^: Single-notch' downgrade	. Twp-noteh~.'| 1 downgrade ' downgrade; . downgrade ;!
Amount of additional collateral to be posted upon downgrade[1]"	$ 104	$ 1,996	$ 560	$ 2,497
Amount required to settle contracts with termination triggers upon downgrade""	247	752	606	1,049

a) includes the additional collateral to be posted for initial margin.
b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 10, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. There were no such transfers accounted for as a sale where the associated derivative was outstanding at June 30, 2017, and such transfers at December 31, 2016 were not material.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/dosses) recorded on such derivatives and the related hedged items for the three and six months ended June 30, 2017 and 2016, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated statements of income.

Gains/flosses) recordediin income

JThree months ended June 30,2017 I (in millions)
Total income . statement ' impact _

Hedge ^ineffectiveness""

- Excluded ' . components'"

Contract type

Interest rate'"1"" Foreign exchange111 Commodity""

Total

128 $ (1,497) 97
(1,272) $

46 $ 1,493 (64)
1,475 $

174 (4) 33
203

(13) 3

(10) $

187 (4) 30
213

Gains/(l6sses).Tec6rded:in income

(Three-months ended June 30, 2016 s,(inmillions) '.. "... '

Contract type

Interest rate"""" Foreign exchange" Commodity""

Total

(709) (1,472) 216

. Derivatives ;. :, Hedged.items;
2,175 $

903 $ 1,487 (215)
(1,965) $

194 15 1

' Hedge •': -iheffeGtiveness"1."
(9)

1 $ (10)
210 $

;;Gain5/(lbsses):i-eroriledin income

•Six months ended June 30,2017 ';(.m millions) ■ -, ^ k 7 v'
Contract type
interest rate'81"" Foreign exchange"1 Commodity"11
. 1.1,| Total income . ., ■.;■ . :-.|.*%
:.x ' "■■""}: ■■ ', ;'f ,;■ -statement - .' .• -Hedge1 ; Excluded .!
424 $ (39) 34
438 (39) 15
577 $ 2,233 400
. Derivatives^ Hedged'items, ^;,r, ^.impact- ^'^mOf^tn^nes^ •• .^e^rnn/Hits^'j

(14) $
(153) $ (2,272) (366)
19
(2,791) $

Six months ended June»30,2016 (in millions) . i . \.
Contract type
Interest rate"""11 Foreign exchange"1 Commodity"11
Total

'•':" " ' . ' .". ' ■ ■ "I

344 99 17

373 99 5

Hedge -i. ...Excluded' J ineffetftyenessi11!" 1 •'mmpbn'ehts*lu
460
17 $

29 $ (12)
477 $

a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.
b) Excludes the amortization expense associated with the inception hedge accounting adjustment applied to the hedged item. This expense is recorded in net interest income and substantially offsets the income statement impact of the excluded components.
c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded primarily in principal transactions revenue and net interest income.
d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or net realizable value (net realizable value approximates fair value). Gains and losses were recorded in principal transactions revenue.
e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.
f) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

110

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/dosses) recorded on such derivatives, for the three and six months ended June 30, 2017 and 2016, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated statements of income.

Gains/Obsses) recorded ihjncome and other'cpmprehensive':inro .

Three months ended June 30,2017 Kin millions) .■■;

Contract type

Interest rate[11]' Foreign exchange""
Derivatives- iHedge
effective portion ineffectiveness - Derivatives - .■
reclassified from recorded directly ' Tbtal'incofhe ;■. • effective portion

(6) (59)
AOCI to income ' in income[11]' . statement impacts .recorded in 'OCI '

(6) $ (59)

(

/total change'.;-,.! ■in OQ.

for period.'.

7 81

(65) $

Gains/dosses) recorded in income and other comprehensive ihcome/(lbss)

jThree months ended June 30i'.20I6 Kihiriiillions)

Contract type

Interest rate[1]" Foreign exchange""
Derivatives-, effective portion reclassified from-■ AOCIto income

(20) (28)

Hedge ineffectiveness recorded directly . in income[10]' .

Total income statement impact

(20) (28)

(6) (133)

".Total change .' |", in OCI .' '-]

(26) $ (161)

(187) $

Gains/Oqsses) recbrded ih income and bther ro

Six months ended June'30,'2017 f(in millions) ' , '. .:'.

Contract type

Interest rate[1]" Foreign exchange"
. Derivatives- Hedge .;. . .. •• . •.
effective portion ineffectiveness - ".' .Derivatives -

(17) (133)
reclassified from. .recorded directly , Total income effective portion
AOCI to income in income™ s. ..statement impact^'..' reccjted jn OGI

- $

(17) $ (133)

(150) $

Gains/Obsses)recbrdedjh income amJ.bUi'er comprehensive. incgme/Oosir

Six months ended June 30,,2016 (in millions) ••; . , ■*? ';■ '

Contract type

Interest rate'" Foreign exchange[16]
Derivatives-' effective portion ■ , reclassified from AOCI to,income/;

(40) (63)
Hedge ineffectiveness ■; recorded directly-

:.Total;.inc6me. 6-

(40) (63)

Derivatives-effective'portion recorded ih'OCI

(100) $ (254)

Tbtahchangei ■. in OCI .

(60) (191)

(103) $

a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.
b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item - primarily noninterest revenue and compensation expense.
c) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

The Firm did not experience any forecasted transactions that failed to occur for the three and six months ended June 30, 2017 and 2016.

Over the next 12 months, the Firm expects that approximately $22 million (after-tax) of net gains recorded in AOCI at June 30, 2017, related to cash flow hedges will be recognized in income. For terminated cash flow hedges, the maximum length of time over which forecasted transactions are remaining is approximately 6 years.
For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately 1 year. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Ill

Net investment hedge gains and losses
The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/dosses) recorded on such instruments for the three and six months ended June 30, 2017 and 2016.

V? ' Gaihs/(iosses) recordeffihjncome aiiid other comprehensive jncome7{ibffi)f

^ v ;•• ; 2oi7 ,.;y "'■■ .,7 •_- ~< 2616 • ~y,.;y' ;j-yi

'jhree mbnths.ended June 30, (in.millibns)y >

	Excluded components recorded directly jn income'".[1] \		. .. recorded in OCL . , ', Effective portion ..		iniincome?[11] recorded directly,,- Excluded components "		..", t':. j J«H>rdeclJn:Og^f Effective portjph '■• '	
Foreign exchange derivatives	$	(50)	$	(319)	$	(65)	$	17

Gains/(iossesii recorded .imincbme'ahd other comprehensive Jncorrie/(lb'ss)y_ ;?

2017>

-Excluded components
recorded directly ■ ■ in.ineome""

(112)

$

Effectiveportion , recorded in OCI

(875)
Excluded components recorded directly ■ in income"[0] '

(150)

'Effective.portion : recordedyn 00'

1 (573)

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in other income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and, therefore, there was no significant ineffectiveness for net investment hedge accounting relationships during the three and six months ended June 30, 2017 and 2016.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pre-tax gains/dosses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, foreign currency-denominated assets and liabilities, and commodities-related contracts and investments.

■ recorded in income ■ ".

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 5 for information on principal transactions revenue.

Three months ended ' June 30;.

Six months ended? > June 30; ;Tj

Kimmillioris),

Contract type

Interest rate'" Credit""

Foreign exchange"[1]'

238 $

(7) (14)

661 (99) 10

221 $ 1,644 (52) (160) (34)

$ 217 $ 572 J 135 $ 1,484

a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.
b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.
c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

Credit derivatives

For a more detailed discussion of credit derivatives, see Note 6 ofJPMorgan Chase's 2016 Annual Report. The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

Maximum payout/Notional amount , '

Credit derivatives

Credit default swaps Other credit derivatives'"

Total credit derivatives

Credit-related notes

Protection ' piirchased with identical underlyingsf?[1]

Protection sold

(844,731) $ (44,420)

901,042

(889,151) (37)

; Other ; , . protection-purchased'1'1

9,650 18,846

28,496 5,486

(889,188) $

Maximum.payouL/Notiohal amount

(pece'mber-31,.2Ql6.(jn milfipns)

Credit derivatives

Credit default swaps Other credit derivatives'"

Total credit derivatives

Credit-related notes

. " Protection

- , ; purchased with

_ Protection sold" jdentical underlyings^

(961,003) $ (36.829)

1,006.111

(997,832) (41)

,'■ . Other '>'--, protection-. ■' Spuitti^ed11?."

7,935 19,991

27.926 4,505

(997,873) $

a) Other credit derivatives largely consists of credit swap options.
b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold: the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives and credit -related notes as of June 30, 2017, and December 31, 2016, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold - credit derivatives and credit-related notes ratings'/maturity profile

|June30;2017 • ■■ '.■ . v.K, " .-.. •. ,.;' - iifln[millions)<2, • .' t '■;	^<ij/ewt	,l'£5 years \£ A*5 V.ears'	.' 0- ■	Total ' ^^notjonalampunt^,^ ^	: '•• : 'jFairvaluedf>i/^.	^Fairvaluedf'=*Netfair;^	
Risk rating of reference entity							
Investment-grade	$ (232,819)	$ (316,114)	$ (38,734)	$ (587,667)	$ 8,789	$ (1,272)	$ 7,517
Noninvestment-grade	(104,209)	(174,787)	(22,525)	(301,521)	8,750	(6,334)	2,416
Total	$ (337,028)	$ (490,901) '	$ (61,259)	$ (889,188)	$ 17,539	$ (7,606)	$ 9,933

IDecember31, 2016. " ..' ., j;(in:rnillions). ; .. ' .. ;.<l'year	o ' :";i-5 year's .;	■%•■' ' '■ > >5,years^ .. *,	'<■'■% Total notional-amount'.; ,	Fairvaiue of:-;,:„■ ' rec'eiyables^'vIIJ,	_Fairvalue of . '.pyaj)les^f. ■	, ,:,Netifaift-I .Aalut..^
Risk rating of reference entity						
Investment-grade	$ (273,688)	$ (383,586)	$ (39,281)	$ (696,555)	$ 7,841	$ (3,055)	$ 4.786
Noninvestment-grade	(107,955)	(170,046)	(23.317)	(301,318)	8.184	(8,570)	(386)
Total	$(381.643)	j (553,632)	$ (62.598)	$ (997.873)	$ 16,025	$ (11,625)	$ 4,400

a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.
b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

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Asset management, administration and commissions

The following table presents the components of Firmwide asset management, administration and commissions.

Note 5 - Noninterest revenue and noninterest expense Noninterest revenue

For a discussion of the components of and accounting policies for the Firm's noninterest revenue, see Note 7 of JPMorgan Chase's 2016 Annual Report.

Investment banking fees

The following table presents the components of investment banking fees.

2016

Three months ended June 30,

;2017

2016

Six months., ended June 30,.

,2017

L(in.milliohs),

Underwriting

Equity Debt

Total underwriting

Advisory

Total investment banking fees

Six months- ' ended June 30,

2017!

. Three months' ended June 30,

364 947

283 896

485 1,446

, 2016 .. S2017. .

1,311 499

1,179 465

1,931 1,046

757 1,875

2,632 995

$ 1,810 $ 1.644 $ 3,627 $ 2,977

$ 2,329 $2,210 $ 4,545 $ 4,338

Asset management fees

97

162

83

Investment management fees'"

All other asset management fees""

187

Total asset management fees	2,412	2.307	4,707	4,525
Total administration fees'"	504	488	986	966
Commission and other fees				
Brokerage commissions	567	535	1,145	1.123
All other commissions and fees	341	351	663	691

Principal transactions

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 6 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Total commissions and fees

908

Total asset management, administration and commissions

1.814

$ 3,824 $ 3,681 $ 7,501 $ 7,305

a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.
c) Predominantly includes fees for custody, securities lending, funds services and securities clearance.

Other income

Other income on the Firm's Consolidated statements of income included the following:

f - *. . - ■ o. .
^inmiNions):;.
Trading revenue by instrument type
Interest rate
Credit
Foreign exchange
Equity
Commodity
Total trading revenue
Private equity gains
Principal transactions
. '.-Six months ..ended June 30;
2017

-.Tlireel months . _ ended'June, 30;,;

1,383 958 1,682 2,238 305

635 728 576 861 224

1,018 1,103 1,283 1,691 450
i'.20i7,.1'.' ;2oi'6'

3,005 132
6,566 153
5,545 110

588 278 901 1,118 120

3,024 (48)

$ 3,137 t 2,976 $ 6,719 J 5.655
-2017/
;2016'
'■ JunettOi:
Operating lease income
201-7,
873 $ 651 $ 1,697 $ 1.266

Other income also included a legal benefit of $645 million recorded in Corporate related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts.

Noninterest expense Other expense

Other expense on the Firm's Consolidated statements of income included the following:

Lending- and deposit-related fees

Six months ended-; June 30; ■

The following table presents the components of lending- and deposit-related fees.

Three months ended '■<;'. ■ June 30,
Six monthS'ended June 30;
2017
2017 :■
.2016,
i2016

Three months ended • June.30.

' (in millions)[1]

Legal expense/(benefit) $ 61 $ (430) $ 279 $ (476)

FDIC-related expense 376 283 757 552

i(ih.millibns):

Lending-related fees Deposit-related fees

2017

269 1,213

2016' •

275 1.128

.2017.

544 2,386

'2016

547 2.259

$ 1,482 $ 1,403 $ 2,930 $ 2,806

114

Note 6 - Interest income and Interest expense

For a description of JPMorgan Chase's accounting policies regarding interest income and interest expense, see Note 8 of JPMorgan Chase's 2016 Annual Report.

The following table presents the components of interest income and interest expense.

'Three7months endedf june.-30;7

5ix mohths'ended; : June 30,

»(in millions)

Interest income

Loans1" Taxable securities Nontaxable securities"

Total securities Trading assets

Federal funds sold and securities purchased under resale agreements Securities borrowed"1 Deposits with banks Other assets""

3,707 3,558 1.130 (188) 926 404

9,996 $ 8,974 $ 19,746 $ 17,828

1,410 1,380 2,840 2,822

1,889 1,806 528 (21) 1,008 444

1,822 1.860 576 (96) 466 211

479 442 937 885

3,777 3,664 1,054

(65) 1,730

786

Total interest income

interest expense

interest-bearing deposits

Federal funds purchased and securities loaned or sold under repurchase agreements Commercial paper

Trading liabilities - debt, short-term and other liabilities"" Beneficial interests issued by consolidated VIEs Long-term debt

15,650

629 387 63 548 128 1,687

13.813

321 282 38 314 118 1.393

30,692

1,112 680 103 986 263

3,276

27,365

641 542 71 541 231 2,612

Total interest expense

Net interest income

Provision for credit losses

3,442

12,208 1,215

2,466

11,347 1,402

6,420

24,272 2,530

4,638

22.727 3,226

$ 10,993 $ 9,945 $ 21,742 $ 19.501

a) Includes the amortization of purchase price discounts or premiums, as well as net deferred loan fees or costs.
b) Represents securities which are tax-exempt forU.S. federal income tax purposes.
c) Negative interest income for the three and six months ended June 30, 2017 and 2016, is related to client-driven demand for certain securities combined with the impact of low interest rates. This is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense.
d) Largely margin loans.
e) Includes brokerage customer payables.

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Note 7 - Pension and other postretirement employee benefit plans

For a discussion of JPMorgan Chase's pension and OPEB plans, see Note 9 of JPMorgan Chase's 2016 Annual Report.

The following table presents the components of net periodic benefit costs reported in the Consolidated statements of income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

.'Pension, plans

PPEB/plans.

[three.moriths ended June 30,;(in millions) ;.

Components of net periodic benefit cost

Benefits earned during the period Interest cost on benefit obligations Expected return on plan assets Amortization:

Net (gain)/loss

Prior service cost/(credit)

Net periodic defined benefit cost

Other defined benefit pension plans"'

Total defined benefit plans

Total defined contribution plans

.2017

74 $ 130 (208)

55 (8)

43

3

46
125
,2016„

74 133 (223)

58 (8)
34 4
38 123
2017

8 $ 20 (34)

7
(1)

3 85
.2016

9 24 (34)

6

(1)

7 83
2017,

7

(24)

(17) NA
(17) NA
.2016)

7

(26)

(19) NA
(19) NA
Total pension and OPEB cost included in compensation expense

Pension plans ;

fsix.mbnths.ended'June 30"(in millions) •.
Components of net periodic benefit cost
Benefits earned during the period Interest cost on benefit obligations Expected return on plan assets Amortization:
Net (gain)/loss
Prior service cost/(credit)
Settlement (gain)/loss
Net periodic defined benefit cost
Other defined benefit pension plans[11]'
Total defined benefit plans

Total defined contribution plans
U.S.;
. 2017 .

149 $ 260 (416)

110 (17)

86 6
92 227
. Non-U.S.
14 (48)
18 50 (70)

11 (1)
15 39 (67)

14 (1) (3)
,2oi6>;.-e:>j:2Qi7.;.. . 2016 & 2017

147 266 (445)
(3) 4
68 7

117 (17)
13 169
75 222

1

169
(34) NA
(34) NA

15 (52)

(37) NA
(37) NA
Total pension and OPEB cost included in compensation expense
(a) Includes various defined benefit pension plans which are individually immaterial.

The following table presents the fair values of plan assets for the U.S. defined benefit pension and OPEB plans and for the material non-U.S. defined benefit pension plans:

(in billions).
Fair value of plan assets
U.S. defined benefit pension and OPEB plans
Material non-U.S. defined benefit pension plans
16.2 3.4
-December 31.1 . x'. r 2di6 !

17.2 $ 3.7

There are no expected contributions to the U.S. defined benefit pension plan for 2017.

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Note 8 - Employee stock-based incentives

For a discussion of the accounting policies and other information relating to employee stock-based incentives, see Note 10 ofJPMorgan Chase's 2016 Annual Report.

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated statements of income.

	Three months ended June30,		Six months ended June30,	
(in millions)	2017	2016	2017	2016
Cost of prior grants of RSUs, stock appreciation rights ("SARs") and performance share units ("PSUs") that are amortized over their applicable vesting periods	$ 290	$ 267	$ 600	$ 551
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	235	287	526	522
Total noncash compensation expense related to employee stock-based incentive plans	$ 525	$ 554	$1,126	$1,073

In the first quarter of 2017, in connection with its annual incentive grant for the 2016 performance year, the Firm granted 23 million RSUs and 675 thousand PSUs, all with a weighted-average grant date fair value of $84.25.

Note 9 - Securities

Securities are classified as trading, AFS or HTM. Securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO within the investment securities portfolio in connection with the Firm's asset-liability management objectives. At June 30, 2017, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings

where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). For additional information regarding the investment securities portfolio, see Note 12 ofJPMorgan Chase's 2016 Annual Report.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

December 31,2016

;(ih:milliorts)

Gross. • Gross Amortized unrealized: Vunrealizedt . cost ■: gains * losses ,,.:

Available-for-sale debt securities

15 1 6

9,418 4,134 6,562

193 149 111

Mortgage-backed securities: U.S. government agencies'" Residential:

U.S.""

Non-U.S. Commercial

4,376

809

4,376

809

212,130

Total available-for-sale debt securities 211,205 Available-for-sale equity securities 925

Total available-for-sale securities

Fair value ■

9.596 4,282 6,667

214,772 925

215,697

, Gross „ Gross j
Amortized "unrealized' 'unrealized;.. : j
.'cpst... gains y, ...losses. •'Fait value -j

8,171 6,049 9,002
100 158 122

28 7 20

$ 64,005

235.516 914

4,096 12

8.243 6,200 9,104
1,647
1,647
236.430
4.108

237.965 926

238,891

Held-to-maturity debt securities

Mortgage-backed securities: U.S. government agencies"[11] Commercial

27,558 5,766

655 2

35 70

28,178 5,698

29,910 5,783

37 129

30,511 5,654

Total mortgage-backed securities

Obligations of U.S. states and municipalities

Total held-to-maturity debt securities

$ 259,891	$ 5.5B9	$ 987	$ 264,493	$ 286,598	$ 5,120	$ 1,938

a) Included total U.S. government-sponsored enterprise obligations with fair values of $51.3 billion and $45.8 billion at June 30, 2017, and December 31, 2016, respectively, which were predominantly mortgage-related.

b) Prior period amounts have been revised to conform with current period presentation.

c) Included total U.S. government-sponsored enterprise obligations with amortized cost of $23.7 billion and $25.6 billion at June 30, 2017, and December 31, 2016. respectively, which were mortgage-related.

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Securities impairment

The following tables present the fair value and gross unrealized losses for investment securities by aging category at June 30, 2017, and December 31, 2016.

JV^Secuntiesw

Less than 12 months"'
Fair value

f June 30,2017 (in millions)

Available-for-sale debt securities
27,165 $
620

Mortgage-backed securities: U.S. government agencies Residential:

U.S.™

Non-U.S. Commercial

1.009

Total mortgage-backed securities 28,794 U.S. Treasury and government agencies 5.464 Obligations of U.S. states and municipalities 3,528 Certificates of deposit

Non-U.S. government debt securities 3.317 Corporate debt securities 640 Asset-backed securities:

Collateralized loan obligations

Other

Total available-for-sale debt securities

Available-for-sale equity securities

Held-to-maturity securities

Mortgage-backed securities U.S. government agencies Commercial

Total mortgage-backed securities

Obligations of U.S. states and municipalities
41,743

2.477 5,274
7.751 2,758
734

35 70
105 65
49,950

2,477 5,274
7,751 2,957
809

35 70
105
73
Total held-to-maturity securities
Total securities with gross unrealized losses $

(a) Prior period amounts have been revised to conform with current period presentation.

119

i £*?.ja

Less than, 12 months'
"Fair.
^December;

. • .. :, Gross '-:;....7V- ',.-„;.■ \.:!/-.:^-'■ Gross '^V/"3.;1; valueV'^

29.856 1,373 2.328

Available-for-sale debt securities
11 $ 30,362 $
463 $
506

1,073 886 1.078

22 7 3

Mortgage-backed securities: U.S. government agencies Residential:

U.S.ta>
17
3.543 "

43 3
486 796 181

36 2

2 6

Non-U.S. Commercial

Total mortgage-backed securities 33,557

U.S. Treasury and government agencies 23.543
55
9 20
421 829

Obligations of U.S. states and municipalities 7,215
Certificates of deposit
Non-U.S. government debt securities 4,436
24 39
5,263 1.992
Corporate debt securities 797
Asset-backed securities:
Collateralized loan obligations 766
Other 739
71,053
Total available-for-sale debt securities
Available-for-sale equity securities
Held-to-maturity debt securities
3,129 5,163
Mortgage-backed securities U.S. government agencies Commercial
12,994
Total mortgage-backed securities 8,292
Obligations of U.S. states and municipalities 4.702
Total Held-to-maturity securities
1,509

37 114
151 125
276
83.156

3.129 5.604
8,733 4,702
13,435
1.647

37 129
166 125
291
Total securities with gross unrealized losses $ 84,047 $

(a) Prior period amounts have been revised to conform with current period presentation.

Gross unrealized losses

The Firm has recognized unrealized losses on securities it intends to sell as OTTI. The Firm does not intend to sell any of the remaining securities with an unrealized loss in AOCI as of June 30, 2017, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI as of June 30, 2017, are not other-than-temporarily impaired. For additional information on other-than-temporary impairment, see Note 12 of the JPMorgan Chase's 2016 Annual Report.

Securities gains and losses

The following table presents realized gains and losses and OTTI losses from AFS securities that were recognized in income.

393 (427)
80 $
(27) (32)
542 $ (572) (7)
189 (79) (38)

j^V c/. <•*-.v.^.;':ᵛ "'\ June.30: :" -" : 7J ,june30i>',Jj (In miiljons) r-^i.>..^
(34) $

21 $ (37) $
72

Realized gains Realized losses OTTI losses[11]'
Net securities gains/ (losses)

(1) (37)

OTTI losses
(32)
(7)

Credit-related losses recognized in income $
$ (32) $
(7)
(38)

Securities the Firm intends to sell[1]"'
Total OTTI losses recognized in income

(a) Excludes realized losses on securities sold of $5 million for both the six months ended June 30. 2017 and 2016 that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities
The cumulative credit loss component, including any changes therein, of OTTI losses that have been recognized in income related to AFS debt securities that the Firm does not intend to sell was not material as of and during the three and six month periods ended June 30, 2017 and 2016.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at June 30, 2017, of JPMorgan Chase's investment securities portfolio by contractual maturity.

tBy remaining maturity [1] Liuhe,3Q, 2017'(in millions)

Available-for-sale debt securities
Mortgage-backed securities'"
Amortized cost
Fair value
Average yield"" U.S. Treasury and government agencies
Amortized cost
Fair value
Average yield"" Obligations of U.S. states and municipalities
Amortized cost
Fair value
Average yield"" Certificates of deposit
Amortized cost
Fair value
Average yield"" Non-U.S. government debt securities
Amortized cost
Fair value
Average yield"" Corporate debt securities
Amortized cost
Fair value
Average yield"" Asset-backed securities
Amortized cost
Fair value
Average yield""
Total available-for-sale debt securities
Amortized cost Fair value
Average yield""
Available-for-sale equity securities
Amortized cost Fair value
Average yield""
Total available-for-sale securities
Amortized cost Fair value
Average yield""
Held-to-maturity debt securities
Mortgage-backed securities'[31]
Amortized cost
Fair value

Average yield"" Obligations of U.S. states and municipalities
Amortized cost
Fair value
Average yield""
Total held-to-maturity securities
Amortized cost Fair value Average yield""
1,681 1,714 2.33%
6.427 6.617 3.14%

25.005 24,895 1.52%

1.184 1,254 6.56%
riV-f v-i- "' T;;D'ue after .brie" '■'.•) 'Dueafterfive';'^
> Due in one year tfi'rbugK five- ; years through lb',
iyearorless " ■,' ^years-->'■"-•' .years.

961 966 1.40%
781 803 3.61°/

146 146 0.59%

73 73 2.61%

-%

14,229 14,480 1.61%

1,105 1,136 3.31%

813 814 1.34%
11,133 11,444 1.04%

1,441 1,487 3.39%

20,777 20,811 2.54%

57 57 0.50%

4.593 4,597 2.64%
65,967 66,508 2.05%
18,609 18,947 1.85%

1,402 1,404 2.78%
-%
65,967 66,508 2.05%
18,609 18,947 1.85%

7,232 7.243 2.44%
1,664 1.727 5.12%

29 29 6.77%

29 $ 29 $ 6.77%

7,232 7,243 2.44%
-%

?fotalrr:;

87.367 88,462 3.24%

28.247 28,158 1.51%

30,735 32.539 6.51%

57 57 0.50%

30.007 30,571 1.55%

4,047 4,132 3.16%

30.745 30.853 2.39%

211,205 214,772 3.12%

925 925 0.41%

212,130 215,697 3.11%

33.324 33,876 3.29%

14,437 14,920 5.63%

47,761 48,796 4.00%

(a) As of June 30, 2017, mortgage-backed securities issued by Fannie Mae exceeded 10% of JPMorgan Chase's total stockholders' equity; the amortized cost and fair value of such securities was $59.9 billion and $61.1 billion, respectively.

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b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

c) Includes securities with no stated maturity. Substantially all of the Firm's U.S. residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately 7 years for agency residential MBS, 3 years for agency residential collateralized mortgage obligations and 3 years for nonagency residential collateralized mortgage obligations.

Note 10 - Securities financing activities

For a discussion of accounting policies relating to securities financing activities, see Note 13 of JPMorgan Chase's 2016 Annual Report. For further information regarding securities borrowed and securities lending agreements for which the fair value option has been elected, see Note 3. For further information regarding assets pledged and collateral received in securities financing agreements, see Note 20.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements as of June 30, 2017 and December 31, 2016. When the Firm has obtained an appropriate legal opinion with respect to the master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparties; this collateral also reduces, in the Firm's view, the economic exposure with the counterparty. Such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented below, if the Firm has an appropriate legal opinion with respect to the master netting agreement with the counterparty. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below, and related collateral does not reduce the amounts presented.

GVij;" '7y7:r^^.71: 7'J. . "^Juneap; wf? 7 7/7.1 . Z ' 77l~|77:&V:£d

	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets	Net amounts
Assets					
Securities purchased under resale agreements	$ 494,707	$ (276,359)	$ 218,348	$ (209,548)	$ 8,800
Securities borrowed	93,224	(2,570)	90,654	(64,626)	26,028
Liabilities					
Securities sold under repurchase agreements	$ 427,884	$ (276,359)	$ 151,525	$ (135,810)	$ 15,715
Securities loaned and other[1]	26,608	(2,570)	24,038	(23,690)	348

:r-w-'-V;V^';:-^ *"< ~ij>*.k : ^■^U;K^ViV nrtV2"'*'.s " V*- .'VI'-;?;-'-."lf****' •VJrc'-r^ yj.
y-.yr-f,; ,;-b% ■. v.■:.;.-j-;,.lW^.L,L >• -..s.'XCix ./v. ^.^j.v:;;',Pg£m te .H:.v':;f*:-<.V -7.i
z7'7-' .'. . • ..• :* ■.',■/.".:':'■ m,,". ,» . .; h ' ..
Ampunts,nerted on Amounts presented t, Amounfi hot neteble • •'; ' J^-'^d
" * "" $y?v'-»»i7-*' " -i/."
^the.ebnsolidated ^dni'theCqnsolidatedf "■ on the'C'niolidated!. *?■■ *?vjN ef-'^X^
IQbS!S^^"!^1!^I:- -A^^M^.^$LecS!^^^^^iiJ^^^'^^k ^^SSS^^^: xJ^^^-^^^S rJ^^^^^^

Assets					
Securities purchased under resale agreements	$ 480,735 $	(250,832)$	229,903 $	(222,413)	$ 7,490
Securities borrowed	96,409	-	96,409	(66,822)	29,587
Liabilities					
Securities sold under repurchase agreements	$ 402,465 $	(250,832)$	151,633 $	(133,300)	$ 18.333
Securities loaned and other"[1]	22,451	-	22.451	(22.177)	274

a) Includes securities-for-securities lending transactions of $11.5 billion and $9.1 billion at June 30, 2017 and December 31, 2016, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities in the Consolidated balance sheets.
b) Includes securities financing agreements accounted for at fair value. At June 30, 2017 and December 31, 2016, included securities purchased under resale agreements of $18.0 billion and $21.5 billion, respectively and securities sold under agreements to repurchase of $721 million and $687 million, respectively. There were $1.6 billion of securities borrowed at June 30. 2017 and there were no securities borrowed at December 31, 2016. There were no securities loaned accounted for at fair value in either period.
c) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related asset or liability with that counterparty.
d) Includes securities financing agreements that provide collateral rights, but where an appropriate legal-opinion with respect to the master netting agreement has not been either sought or obtained. At June 30, 2017 and December 31, 2016, included $6.3 billion and $4.8 billion, respectively, of securities purchased under resale agreements; $22.9 billion and $27.1 billion, respectively, of securities borrowed; $12.1 billion and $15.9 billion, respectively, of securities sold under agreements to repurchase; and $200 million and $90 million, respectively, of securities loaned and other.

122

The tables below present as of June 30, 2017, and December 31, 2016 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

Gross liability balance.

i,. December 31-; 201'fr"

£(ih:miliibfis).

Mortgage-backed securities
U.S. Treasury and government agencies
Obligations of U.S. states and municipalities
Non-U.S. government debt
Corporate debt securities
Asset-backed securities
Equity securities
Total
/■.Securitiessold'.'" l. r-< " ../'..i': uriderTepurehase; Secufities.loahed • ^agreements." ' ';" ?and othe? 'A£ '
$

942

3,607 53 103 21,903 26,608

9,745 $ 202,102 1,355 180,773 14,677 4,137 15,095 427,884 $

• . Securities sold under repurchase \J ..agreements- ,'*-

10.546 $ 199,030 2,491 149,008 18.140 7.721 15,529 402,465 $

"i .r?'?'™" > '■ v Remaining contract
! -,■ ~ .;■ '■" '■ . ', /, Overnight and .'■ '"■ :-' , " Greater than • ,- '* f

June 30,2017 (in mjljiqns) \.-. .,;■">; ^continuous : .; Upjo'3^				. .] - \ .f Total;;
Total securities sold under repurchase agreements	$ 154,721 $	178,772 $	53,376 $	41,015 $ 427,884
Total securities loaned and other[14]	20,989	1,192	1,687	2,740 26,608

f°^' *V'°'y'" "."'"-v'/'*v-..;r7'; .'M..'.;r^W£**^X*^

•{*'•»'.:•".'■■•' •	• '- '. i-~ -?r.' '• v v"r'-;v: -~; ••*	"- ■ :rx-*~.: .•>>;••;'••;• *	.rvrc-.-V"sx-'" '."•<?•••,"		
-r j^*'". .' ',' - >v';..-*-;-*-,..; - ^*,;Overriightiahd J		:"V- - > '•. •• v'•"-::>.•	Greater tKan'S^^'^s ^ ?..		
ij"cemfef:3ft;2W	j; .. tj;^^/^^hjjbus...v"; ,JrHp;30	days '.':/.^3p f TO'days^ ^M.^^^^:'l^'7^^j°Mi^i			
Total securities sold under repurchase agreements	$ 140,318 $	157,860 $	55,621 $	48,666 $	402,465
Total securities loaned and other*3'	13,586	1,371	2,877	4.617	22,451

(a) Includes securities-for-securities lending transactions of $11.5 billion and $9.1 billion at June 30, 2017 and December 31, 2016, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities on the Consolidated balance sheets.

Transfers not qualifying for sale accounting

At June 30, 2017, and December 31, 2016, the Firm held $4.9 billion and $5.9 billion respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in other borrowed funds on the Consolidated balance sheets.

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Note 11 - Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than PCI loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

For a detailed discussion of loans, including accounting policies, see Note 14 of JPMorgan Chase's 2016 Annual Report. See Note 3 of this Form 10-Q for further information on the Firm's elections of fair value accounting under the fair value option. See Note 2 of this Form 10-Q for information on loans carried at fair value and classified as trading assets.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

: Consumer,:excluding -credit card'?'

Residential real estate - excluding PCI
- Home equity"[11]
- Residential mortgage[10]

Other consumer loans
- ■Auto[(d)]
- Consumer & Business Banking[ld,(el]
- Student

Residential real estate - PCI
- Home equity
- ■Prime mortgage
- Subprime mortgage
- Option ARMs

•Commercial and industrial ■ Real estate
•Financial institutions
•Government agencies
•Other[181]

a) Includes loans held in CCB. prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate.
b) Includes senior and junior lien home equity loans.
c) Predominantly includes prime (including option ARMS) and subprime loans.
d) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
e) Predominantly includes Business Banking loans.
f) Includes loans held in CIB, CB, AWM and Corporate. Excludes prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
g) Includes loans to: individuals; SPEs; and private education and civic organizations. For more information on SPEs, see Note 16 of JPMorgan Chase's 2016 Annual Report.

The following tables summarize the Firm's loan balances by portfolio segment.

Retained Held-for-sale At fair value Total

365,115 256

365,371

140,035 106

140,141

394,426 6,850 1,979

403,255

$ 899,576 7,212

1,979

$ 908,767

tDecerhber'31,-,201'6 ■'(in millions) . ,

Retained Held-for-sale At fair value

Total

' Consumer, excluding'-^ . credit card ..'■> '• V ,

364,406 238

364,644

141,711 105

141,816

wholesale".

383,790 2,285 2.230

388,305

• •Total:' \i

889,907 2,628 2,230

894,765

a) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
b) Loans (other than PCI loans and loans for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs. These amounts were not material as of June 30. 2017, and December 31, 2016.

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The following table provides information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. This table excludes loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

'. ■„■ -„■ --i-e .-... - .'',

Z,s. -,s : V ' -
jfhfee months ended. June'3'O;: S^inmiljions) 'J'.'"'-'. „■

Purchases Sales
Retained loans reclassified to held-for-sale
f'2017':

594 $ 2,377

307

'. Consumer., :\ •* . . (.'-'.'...J■ 'j..'fe'"-•. -' excluding^'f, OijV.*;?. £y / <•>. '-h-■ : »\t credit card; ■■j&^^^tcff^gn^fes^ ^iTotel:..'

$
$

626 """ $ 763

31

405 $ 2.082

127

1.229 2,987

145

*. Consumer; ;v-'.-'V:,s. ". if^:^i^p^^-t:<.:y'M •excluding -"f; -J;'".-- *^??:;^^j^ ^.i /'credit .card (\ 'I^^J^^aij^JHt1^^^^^r^^*

824 """ 905

18

•-2016'

•'••, . . - . Consumer, \: Si. Vrv-'V,'- -,;:.,' .-":Mi«
*■ ^excluding , *l. Z'^-'i-ii!'?7"-:j.r*

878 $ 2,444 4,824 6,177

2.089 "'"" 1,665

83
'Total;.'credit;card^:!*f=;:Creditcu'df'X wholesale;;;, ^Total^S?
7,108
699

$ 693 $ 2,782 3,746 5.411

616

a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae. FHA. RHS, and/or va.
b) Excludes purchases of retained loans sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $5.9 billion and $8.4 billion for the three months ended June 30, 2017 and 2016. respectively, and $11.3 billion and $17.1 billion for the six months ended June 30, 2017 and 2016, respectively.
c) Includes the Firm's student loan portfolio, which was transferred to held-for-sale in the first quarter of 2017. For additional information see Note 23.

The following table provides information about gains and losses on loan sales, including lower of cost or fair value adjustments, by portfolio segment.

& - '>vr . .:.••;••.:•.»'•<-. •'.< ■■■■■ j .x-r: •',."«; <:v •'••.;.."••:••,•

'l.'-i: %* -'a' ••'•'•,•• «C ';.';-; \':££r..;. J =.'•• v-V.VW '■ •'

a(in;mnhpns)o,,;;...^u^jfeia^a^a^'.i^^^ffc'M'.

Net gains/dosses) on sales of loans (including lower of cost or fair value adjustments)"
Consumer, excluding credit card[101]
Credit card

vvnolesale

12 $
(3)
17

64 (4)

(214) (2) 22

117 (4)
(2)

Total net gains on sales of loans (including lower of cost or fair value adjustments)

a) Excludes sales related to loans accounted for at fair value.
b) Includes the Firm's student loan portfolio, which was transferred to held-for-sale in the first quarter of 2017. For additional information see Note 23.

Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, consumer and business banking loans, and student loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class. In the first quarter of 2017, the Firm transferred the student loan portfolio to held-for-sale. For additional information see Note 23.

Residential real estate - excluding PCI
Home equity Residential mortgage"' Other consumer loans Auto
Consumer & Business Banking"' Student"'
Residential real estate - PCI
Home equity Prime mortgage Subprime mortgage Option ARMS
Total retained loans

36,000 205,380

65,627 25,044

June 30; . DkembeKSltf. ';: ^2di7-:^. :>.-^2016"

39,063 192.486
11,838 7,023 2,771
11,432

65.814 24,307 7,057

12,902 7,602 2,941
12,234
365,115 $ 364,406

(a) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

For further information on consumer credit quality indicators, see Note 14 of JPMorgan Chase's 2016 Annual Report.

Residential real estate - excluding PCI loans

The following table provides information by class for residential real estate - excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

Residential real estate - excluding PCI loans

Loan delinquency" [1]
Current

30-149 days past due 150 or more days past due
Dec 31.
'-2016:;

"\Honie <file:///Honie>. equity; ■'_|_ .,- J ^)denta['mohss\ie'f .-

Jun 30, : ",2017

$ 198,261 $ 184.133 3,284 3.828 3,835 4.525

Total residential realiestate^

T '■' ■': Jun 30,' ? T> bec : 3 iiy 2017 .;.I■ ■ ioiei

$ 233,322 $ 222.074 3.819 4.474 4,239 5.001

Total retained loans

% of 30+ days past due to total retained loans""

90 or more days past due and government guaranteed"

Nonaccrualloans

Current estimated LTV ratios'd>(e)

Greater than 125% and refreshed FIC0 scores:

Equal to or greater than 660

Less than 660 101% to 125% and refreshed FICO scores:

Equal to or greater than 660

Less than 660 80% to 100% and refreshed FICO scores:

Equal to or greater than 660

Less than 660 Less than 80% and refreshed FICO scores:

Equal to or greater than 660

Less than 660 No FICO/LTV available U.S. government-guaranteed

$ 36,000 $ 39,063

2.61%

18 7

370 120

2,138 692

26,400 4,135 2,120

1.845

70 15

668 221

2,961 945

27,317 4,380 ■ 2,486

$ 205.380 $ 192.486

30 48

135 177

4.026 718

169,579 6,759 1,650 9.364

0.63% 3,959 $ 2,089

25 39

58 128

3,330 555

184,119 6.993 1.548 8,585
$ 241,380 $ 231,549
100

63

803 398

6.987 1.663

196.896 11.139 4,136 9,364

0.92% 1.11% 3,959 $ 4.858 3.734 4.101

43 46

428 248

5,468 1,247

210,519 11,128 3,668 8,585

Total retained loans

Geographic region

California

New York

Illinois

Texas

Florida

New Jersey

Colorado

Washington

Massachusetts

Arizona

All other[1"]

Total retained loans

7,644 7,978 2,947 2.225 2.133 2,253

677 1.229

371 1,772 9,834

59.802 24,916 13.126 10,772 8.395 6.374 6.306 5.451 5,834 3,595 47.915

67.446 32,894 16.073 12,997 10,528 8,627 6,983 6,680 6.205 5.367 57,749

7,053 7,377 2,705 2,124 1,973 2,091

630 1,122

332 1,598 8,995

64,827 26,479 13,884 11,693 9,176 6,735 6,865 6,177 6,060 3,899 49,585

$ 36,000 $ 39,063 $ 205,380 $ 192.486 $ 241,380 $ 231.549
$ 241,380 $ 231.549

71,880 33,856 16,589 13,817 11,149 8,826 7,495 7,299 6,392 5,497 58,580

$ 205,380 $ 192,486

a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.8 billion and $2.5 billion: 30-149 days past due included $2.6 billion and $3.1 billion: and 150 or more days past due included $3.2 billion and $3.8 billion at June 30. 2017, and December 31. 2016. respectively.

b) At June 30, 2017. and December 31, 2016, residential mortgage loans excluded mortgage loans insured by U.S. government agencies of $5.8 billion and $6.9 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

c) These balances, which are 90 days or more past due, were excluded from nonaccrual loans as the loans are guaranteed by U.S government agencies. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subiect to meeting agreed-upon servicing guidelines. At June 30. 2017, and December 31. 2016, these balances included $1.9 billion and $2.2 billion, respectively, of loans that are no longer accruing interest based on the agreed-upon servicing guidelines. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate. There were no loans that were not guaranteed by U.S. government agencies that are 90 or more days past due and still accruing interest at June 30, 2017, and December 31, 2016.

d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
f) At June 30, 2017, and December 31. 2016, included mortgage loans insured by U.S. government agencies of $8.6 billion and $9.4 billion, respectively.
g) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

The following table represents the Firm's delinquency statistics for junior lien home equity loans and lines as of June 30, 2017, and December 31, 2016.

^^^m^W^^- i ~:C -'-W^Total^bVdayV^ $V,v •*-..?V"".'" *-'-i.V Total loans ZJ;-- "deiinquenr^rateTy ix" ■■■■ \'y??i£!t-&:*?-.-...„'-.,*\'-.,-.-- -i7' '- ~- :: S(in:milliohs,* except ' .
;. Jun 30, Dec 31, .., Jun 30, Dec 3l,s jTatios).;., ; **;\ /■■; •.- .2Qi7y,'Jr. 2016;^,7203.7 , 2016:1

HELOCs:[a]				
Within the revolving period[b]	$ 7,951	$ 10,304	0.79%	1.27%
Beyond the revolving period	13,572	13,272	2.76	3.05
HELOANS	1,599	1,861	2.69	2.85
Total	$ 23,122	$ 25.437	2.08%	2.32%

a) These HELOG are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOG that allow interest-only payments beyond the revolving period.
b) The Firm manages the risk of HELOG during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty.

HELOCs beyond the revolving period and HELOANs have higher delinquency rates than HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the Firm's allowance for loan losses.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 of JPMorgan Chase's 2016 Annual Report.

ly^fi' 7 ^Z^Z^W^I 7. 7~~Z^z7, -V '777 ~ i^-^jr^r' \7 7"7V""7\'?7'Z. r.;.. total residential reajistateji
••/>• '•; -W:':<V-V:\i#v,;:.- ,.. ' -;V,7 . -\'71 •■ v ;•' ■•■ Home'equity ■ 7. i" Residential'mbrtgage .• •« ' '- excluding PCK\VTf

K ' ".7'7 f*7V Z ' r'""r-7. r-] ■■ , 7- " 7 ■ r*	~Juh30;:	'7*7 J3ec3ll	y '.' Juh-3'6,;	'-bec3i'.	7: 'V Jun30,	". ' Dec3a&j
Impaired loans						
With an allowance	$ 1,241	$ 1,266	$ 4,529	$ 4,689	$ 5,770	$ 5,955
Without an allowance[a]	921	998	1,275	1.343	2,196	2,341
Total impaired loans[b][c]	$ 2,162	$ 2.264	$ 5,804	$ 6.032	$ 7,966	$ 8,296
Allowance for loan losses related to impaired loans	$ 126	$ 121	$ 67	$ 68	$ 193	$ 189
Unpaid principal balance of impaired loans[d]	3,805	3,847	7,996	8,285	11,801	12.132
Impaired loans on nonaccrual status[e]	1,056	1.116	1,684	1,755	2,740	2,871

a) Represents collateral-dependent residential real estate loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At June 30, 2017, Chapter 7 residential real estate loans included approximately 11% of home equity and 13% of residential mortgages that were 30 days or more past due.
b) At June 30. 2017, and December 31, 2016, $3.9 billion and $3.4 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.
c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.
d) Represents the contractual amount of principal owed at June 30, 2017, and December 31, 2016. The unpaid principal balance differs from the impaired loan balances due to various factors including charge-offs, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.
e) At both June 30, 2017 and December 31, 2016, nonaccrual loans included $2.3 billion of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer, to the Loan accounting framework in Note 14 of JPMorgan Chase's 2016 Annual Report.

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The following tables present average impaired loans and the related interest income reported by the Firm, fihree

monfeerib^d o'^ll^Aye^

Home equity	$ 2,241	$ 2.340	$ 30	$ 32	$ 18	$ 20
Residential mortgage	5,865	6,453	68	77	14 -	20
Total residential real estate - excluding PCI	$ 8,106	$ 8,793	$ 98	$ 109	$ 32	$ 40

F" .* ; 7 ,»• .»•.'••"**","* .* „ j tv; *. '•* .'*' ' " *• r interest^ihcbmeon '- . > Interestinro'me pn.impaired - ,'j

[six months ended June'3di ■ ' >" '<-'■? ^y^f^^^f&i&P? \ .'jnipainrfloans f_ '_, .»„ •^Jj@ 1 Si<*!»a* .'.)

r'On mjjlions) . ...'. . :-.\ , ■/;t, " ' r 1 ■;,	2016' ../ 7, . . ?017~		■ 2Q16		' .'T-' ; 2017	
Home equity	$ 2,245	$ 2,350	$ 61	$ 63	$ 38	$ 41
Residential mortgage	5,921	6.534	141	155	33	39
Total residential real estate - excluding PCI	$ 8,166	$ 8,884	$ 202	$ 218	$ 71	$ 80

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms, unless the loan is deemed to be collateral-dependent.

The following table presents new TDRs reported by the Firm.

r,.-f". 'Ji'y 'Z'^..Three months ■ '■•-. *!j;.-Jj .".'•. 1 -. "'.■,' ended Ju'ne.30,..*			vSiximonth5.ended;'.l *.,'June 30...;. ;ij*	
Home equity	$ 69	$ 70	$ 150	$ 196
Residential mortgage	96	59	168	122
Total residential real estate - excluding PCI	$ 165	$ 129	$ 318	$ 318

Loan modifications

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following tables provide information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs described above during the periods presented. These tables exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

Total residential . •;. : } "' ..real estate-- '. "•'.': I excluding PCI;: ' 4

I.Three months ended'June 30;

Number of loans approved for a trial modification Number of loans permanently modified Concession granted:[1]"

Interest rate reduction

Term or payment extension

Principal and/or interest deferred

Principal forgiveness

Other[16']

688 949

; ,;20i7 'Xvyy.:^2Q16.^y „■■;,.. .»:2017

84 20 11 1

565 1,583

59% 78

9

9 15

.2016

555 979

71%

90

16

29

23

,■2017

955 2,242

62%

79

13

12

18

il 2016,,]

1,243 1,928

75%
87
18
20
12

fV"
VP

1,737 2,641

71% 88 18 10 1

1,308 2,800

71% 84 13 9 13

';■•■'.. '{'>.' v« ;>">• v.r ••. ^ Home equity- y|c^.

Number of loans approved for a trial modification Number of loans permanently modified Concession granted:[1]"

Interest rate reduction
Term or payment extension
Principal and/or interest deferred
Principal forgiveness
Other[11]"

846 1,442

76%
86
14
19
27

';"■' it > "r,

1.135 1,711

72%
90
19
27
21

2,154 4,242

72%
84
14
12
18

•Totalresidential . .^j ':■ real estate -.' f^f* | ';. excluding PCifvUQ;,;;

2017

2.872 4,352

71% 89 18 17 9

a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions. J

b) Predominantly represents variable interest rate to fixed interest rate modifications.

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Financial effects of modifications and redefaults

The following tables provide information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the loss mitigation programs described above and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following tables present only the financial effects of permanent modifications. These tables also exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

*frtfee monthsended June 30.' " :v; y|-Z% ;"';'^,/' ;.: u^a^': *l-|. '^'47^ >* oV ^^^^^^([^^7
Jtin millions;exceptweigr,ted-avera gedata, ■ =. - " Homeegujtv;- .> v,.^■Residential mortgage. ;|^excluding.Ft:ix:^v^;
^ndnumberpf loans). . ,,: T^l'.S^ZOij-V.^J'^iZb ..^•...■2016;."-,,^

Weighted-average interest rate of loans with interest rate reductions - before TDR	5.04%	5.28%	5.13%	5.67%	5.09%	5.54%
Weighted-average interest rate of loans with interest rate reductions - after TDR	2.39	2.52	3.12	2.98	2.79	2.83
Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR	26	17	23 "	25	25	22
Weighted-average remaining contractual term (in years) of loans with term or payment extensions - after TDR	38	38	37	38	38	38
Charge-offs recognized upon permanent modification						
$-$ -% -% 1$-$ 1						
Principal deferred	2	4	4	9	6	13
Principal forgiven	3	1	6	13	9	14
Balance of loans that redefaulted within one year of permanent modification[13']	$ 12	11	$ 30	$ 26	$ 42	$ 37

Weighted-average interest rate of loans with interest rate reductions - before TDR	4.82%	5.13%	5.25%	5.60%	5.06%	5.40%
Weighted-average interest rate of loans with interest rate reductions - after TDR	2.42	2.46	3.00	2.92	2.74	2.73
Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR	23	18	24	25	24	22
Weighted-average remaining contractual term (in years) of loans with term or payment extensions - after TDR	39	38	38	38	38	38
Charge-offs recognized upon permanent modification	$ 1	$ 1	$ 1	$ 2	$ 2	$ 3

Principal deferred	7	12	7	19	14 31	
Principal forgiven	5	4	11	25	16	29
Balance of loans that redefaulted within one year of permanent modification[1]"	$ 21	$ 20	$ 58	$ 48	$ 79	$ 68

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At June 30, 2017, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 10 years for home equity and 13 years for residential mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At June 30, 2017, and December 31, 2016, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $796 million and $932 million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

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Other consumer loans

The table below provides information for other consumer retained loan classes, including auto and business banking loans. This table excludes student loans as a result of the transfer of the student loan portfolio to held-for-sale in the first quarter of 2017 and its subsequent sale in the second quarter of 2017.

•J> ■ •• -. ' •. •. • ... ■■■ -..<•'.-;•• '<< •/ ..... ., .,

Loan delinquency

Current

30-119 days past due 120 or more days past due

65,050 568 9

65,029 773 12

24,746 150 148

23,920 247 140

Total retained loans

% of 30+ days past due to total retained loans Nonaccrual loans[1]"

Geographic region

California

Texas

New York

Illinois

Florida

Ohio

Arizona

Michigan

New Jersey

Louisiana

All other

65,627 $

0.88% 158

8,347 6,807 3,974 4,052 3,369 2,126 2,132 1,552 2,044 1,712 29,512

65,814

1.19% 214

7.975 7,041 4,078 3,984 3,374 2,194 2,209 1,567 2,031 1,814 29.547

25,044 $

1.19% 301

4,731 2,929 4,066 1,867 1,263 1,412 1,305 1,350 658 951 4,512

24,307

1.59% 287

4,426 2,954 3,979 1,758 1.195 1,402 1,307 1.343 623 979 4.341

Total retained loans

Loans by risk ratings""

Noncriticized Criticized performing Criticized nonaccrual

65,627 $

14,863 $ 119 56

65,814

13.899 $ 201 94

25,044 $

17,465 750 227

24.307

16,858 816 217

a) There were no loans that were 90 or more days past due and still accruing interest at June 30, 2017, and December 31, 2016.
b) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.
c) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

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Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

>i " (tri:m»liqns);,,; ^,;:',:.\. :■'..';	': Jurie'30, .y 2017	December31,3 ' .\;. ...2016J
Impaired loans		
With an allowance	$ 345	$ 614
Without an allowance[a]	29	30
Total impaired loans[b][c]	$ 374	$ 644
Allowance for loan losses related to impaired loans	$ 103	$ 119
Unpaid principal balance of impaired loans[d]	462	753
Impaired loans on nonaccrual status	331	508

a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
b) Predominantly all other consumer impaired loans are in the U.S.
c) Other consumer average impaired loans were $381 million and $622 million for the three months ended June 30, 2017 and 2016, respectively, and $501 million and $596 million for the six months ended June 30, 2017 and 2016, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the three and six months ended June 30, 2017 and 2016.
d) Represents the contractual amount of principal owed at June 30, 2017, and December 31,2016. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, interest payments received and applied to the principal balance, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All of these TDRs are reported as impaired loans in the table above. See Note 14 of JPMorgan Chase's 2016 Annual Report for further information on other consumer loans modified in TDRs.

The following table provides information about the Firm's other consumer loans modified in TDRs. New TDRs were not material for the three and six months ended June 30, 2017 and 2016.

jr. • ffjnmillions) . ,J^;7· Z7<Z7sZ:7&7'■	:■ '7*7' 7 '"^•7 '■ :;i««K.3bj*„ jgOl?;^A	.£>KembeV$ii3
Loans modified in TDRs[a][b]	$ 119	$ 362
TDRs on nonaccrual status	76	226

a) The impact of these modifications were not material to the Firm for the three and six months ended June 30, 2017 and 2016.
b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of June 30. 2017, and December 31. 2016, were immaterial.

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Purchased credit-impaired loans

For a detailed discussion of PCI loans, including the related accounting policies, see Note 14 of JPMorgan Chase's 2016 Annual Report.

Residential real estate - PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

Prime;mdrtEage'.;;-,;: _.. Subprime mortgage

^^iMUi^°aKe^.ratios); v „

Carrying value[1]"

Related allowance for loan losses'"

Jun 30, . ,2017.

$11,838 1.133

. Dec 31. ; ,2016.

$12,902 1.433

Jun30; , .'2bi7:■

$ 7,023 903

■Dec 31;. :2016-

$ 7,602 829

Jun 30, ■2017;

Dec 31;.. ■ . 2016; X;

$ 2,771 $ 2,941 150

Dec 31, . 2016

$12,234 49

Jun 30,

■ .2017'

$33,064 2,265

$35,679 2.311

Loan delinquency (based on unpaid principal balance)

Current	$11,396	$12,423	$ 6.367	$ 6.840	$ 2,914	$ 3,005	$10,443	$11,074
30-149 days past due	268	291	296	336	292	361	466	555
150 or more days past due	434	478	384	451	188	240	774	917

$31,120 $33,342 1.322 1.543 1,780 2,086

$12,098 $13,192 $ 7.047 $ 7.627 $ 3,394 $ 3.606 $11,683 $12,546 $34,222 $36,971

% of 30+ days past due to total loans

69 39

Current estimated LTV ratios (based on unpaid principal balance)[10]""

44

23

Greater than 125% and refreshed FICO scores:

Equal to or greater than 660

365 175
555 256
Less than 660 101% to 125% and refreshed FICO scores:
Equal to or greater than 660
1,480 678
1,860 804
Less than 660 80% to 100% and refreshed FICO scores:
Equal to or greater than 660
Less than 660 Lower than 80% and refreshed FICO scores:

Equal to or greater than 660	6,461 6,676
Less than 660	2,159 2.183
No FICO/LTV available	713 750

6 16

27 56

292 289

3,781 2,209 371

6 17

52 84

' 442 381

3,967 2.287 391

5 25

26 94

146
356

936 1,641 165

7 31

39 135

214 439

919 1.645 177

6 13

61 91

376 463

6,438 3,691 544

12 18

83 144

558 609

6,754 3.783 585

$ 61 77

479 416

2,294 1,786

17,616 9,700 1,793

$ 94 105

729 619

3.074 2.233

18,316 9.898 1.903

$12,098 $13,192 $ 7,047 $ 7.627 $ 3,394 $ 3.606 $11,683 $12,546 $34,222 $36,971

Geographic region (based on unpaid principal balance)

California Florida New York Washington New Jersey Illinois

Massachusetts Maryland Arizona Virginia All other

7,218 1,224 653 603 259 294 88 60 219 71 1,409

7.899 1,306 697 673 280 314 94 64 241 77 1.547

$ 4,034 465 487 151 196 215 159 138 113 132 957

$ 4.396 501 515 167 210 226 173 144 124 142 1,029

846 313 347 64 119 169 104 138 63 53 1,178

899 332 363 68 125 178 110 145 68 56 1,262

$ 6,626 971 660 263 373 269 321 248 167 296 1.489

7,128 1.026 711 290 401 282 346 267 181 314 1,600

$18,724 2,973 2.147 1,081 947 947 672 584 562 552 5,033

$20,322 3.165 2,286 1.198 1.016 1.000 723 620 614 589 5,438

$12,098 $13,192 $ 7,047 $ 7,627 $ 3,394 $ 3,606 $11,683 $12,546 $34,222 $36,971

a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.
b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.
c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.
d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

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Approximately 24% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table sets forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of June 30, 2017, and December 31, 2016.

Tbtal'.loans

aJuri.30,

Dec 31,1

Dec 31-, 2016:,
Jun 30; 2017,

. Total ^ delinquency^rate '^.f
3.94%
3.67%
HELOCS:'"

Within the revolving period"" $

Beyond the revolving period'"

HELOANs

-(ihimiliions; except r ratios) ..- ?.;':■
3.97 4.65

7,452 465

4.03 5.38

787 $ 2.126
Total
4.00%
4.01%

7,957 409

$ 9,153 $ 10,043

a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
b) Substantially all undrawn HELOCs within the revolving period have been closed.
c) Includes loans modified into fixed rate amortizing loans.

jrih™iMqps.™
Beginning balance

Accretion into interest income

Changes in interest rates on variable-rate loans

Other changes in expected cash flows'"

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the three and six months ended June 30, 2017 and 2016, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

J 13,122 $12,674 $11,768$13,491

(357) (395)(716)(802)

51 25 167 101

(177) (3)1,420(489)

Balance at June 30 $12,639 $12,301 $12,639 $12,301

Accretable yield percentage 4.55% 4.37% 4.45% 4.36%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model, for example cash flows expected to be collected due to the impact of modifications and changes in prepayment assumptions.

Active and suspended foreclosure

At June 30, 2017, and December 31, 2016, the Firm had PCI residential real estate loans with an unpaid principal balance of $1.5 billion and $1.7 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

2017

The table below sets forth information about the Firm's credit card loans.

5,2016}

£f °^-0june.3O ₜ%^Qej»h1beij:jl^

r(jn^jlliqns.:exce^

$ 137,811 $ 139.434 1,099 1.134

Loan delinquency

Current and less than 30 days past due and still accruing
1,125
1.143

$ 140,035 $ 141,711

30-89 days past due and still accruing

90 or more days past due and still accruing

Total retained credit card loans

1.59% 0.80

1.61% 0.81

Loan delinquency ratios

% of 30+ days past due to total retained loans

% of 90+ days past due to total retained loans

20,592 13,256 12,236 8,481 8,080 6,134 4,745 4,624 3,752 3,621 54,514

20.571 13,220 12.249 8,585 8.189 6.271 4,906 4,787 3,699 3,741 55,493

Credit card loans by geographic region

California

Texas

New York

Florida

Illinois

New Jersey

Ohio

Pennsylvania

Colorado

Michigan

$ 140,035 $ 141.711

All other i

Total retained credit card loans

84.2% 14.4 1.4

84.4% 14.2 1.4

Percentage of portfolio based on carrying value with estimated refreshed FICO scores

Equal to or greater than 660

Less than 660

No FICO available

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Credit card impaired loans and loan modifications

For a detailed discussion of impaired credit card loans, including credit card loan modifications, see Note 14 of JPMorgan Chase's 2016 Annual Report.

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

;2017.
2017

^i-;:/WThree'months ehded~v;:i Sixmbhths!e^(ild!:^ ' ' ■..>,,^"June .30;-. . ; ..' .. '.- ■ June 30;! "V;^

.201'6>
?(ih millions)

June 30,." December 3l,< ;>20i7" . • 2016i

Impaired credit card loans with an allowance131""

Credit card loans with modified payment terms"1 $ 1,078 $ 1,098

Modified credit card loans that have reverted to pre-modification payment terms"" 126 142

Weighted-average interest rate of loans -before TDR

Weighted-average interest rate of loans -after TDR

Loans that redefaulted within one year of modification[3]
1,204 $
1,240
370 S
358
$
Total impaired credit card loans[6]
Allowance for loan losses related to
impaired credit card loans

a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
b) There were no impaired loans without an allowance.
c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At June 30. 2017. and December 31. 2016. $85 million and $94 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $41 million and $48 million at June 30, 2017, and December 31. 2016. respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for modified credit card loans was expected to be 30.70% and 28.87% as of June 30, 2017, and December 31, 2016, respectively.

iietMiiuiHii^ enueu'.; -.^lai* iiiuiiuu,eiiueu^5

^. _ ^r . ,.17..JU9e.:?P'; 7\.70w$39::/7$

$ 1,212 $ 1.345 $ 1,220 $ 1,390

Ba|gffigfe)^. 2o|S

Average impaired credit card loans
16
15
29
33
Interest income on impaired credit card loans

Loan modifications

The Firm may modify loans to credit card borrowers who are experiencing financial difficulty. Most of these loans have been modified under programs that involve placing the customer on a fixed payment plan with a reduced interest rate, generally for 60 months. All of these credit card loan modifications are considered to be TDRs. New enrollments in these loan modification programs were $176 million and $141 million, for the three months ended June 30, 2017 and 2016, respectively, and $361 million and $300 million for the six months ended June 30, 2017 and 2016, respectively. For additional information about credit card loan modifications, see Note 14 ofJPMorgan Chase's 2016 Annual Report.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. The primary credit quality indicator for wholesale loans is the risk rating

assigned to each loan. For further information on these risk ratings, see Note 14 and Note 15 ofJPMorgan Chase's 2016 Annual Report.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

Effective in the first quarter of 2017, the Firm revised its methodology for the assignment of industry classifications, to better monitor and manage concentrations. This largely resulted in the re-assignment of holding companies from Other to the industry of risk category based on the primary business activity of the holding company's underlying companies or enterprises. In the tables below, the prior period amounts have been revised to conform with the current period presentation.

f"! ■■'P v ^■cbmmen^y-vV/,.", '"-^";^'. and'industrial;.: £ _ |-'X'. ;• vReal Bstate.,.; , :>V Financial ■ ',' institutions^ to'cr™ i,;V^'^^*.'""^-'"' vV6'..:'" ^f<Aii'7f-.J"^p.

/,-;P,-.v'

ifln millions. "3 :*tm30, ■ *bec31\/^ (Jun:30, Oec-31^"/, <?Jun 30, ■. .*' \bec3i <file:///bec3i>; 0#Ju»i6,.-i**' Dec-3$;. ■" junSO,.. £ * bec3r. ;, Uuh:30;. ' . Decilljp
t^rtptratjosr,.; it;:^2Pi7,.;·..J;-^jfeS.^K^^°^7i. ^ &&7^a^9}2.W Loans by risk ratings

Investment-grade	$ 68,142	{ 65,687	$ 93,465	$ 88.649	$23,705	$ 24,294	$15,601	$ 15,935	$101,773	$ 95,358	$302,686	$ 289,923
Noninvestment-grade:												

	46,729	47.531	15,461	16.155	11,630	11.075	393	439	9,383	9.360	83,596	84.560
Criticized performing	5,270	6.186	826	798	320	200	-	6	94	163	6.510	7.353
Criticized nonaccrual	1,176	1,491	152	200	30	9			276	254	1,634	1.954
Total noninvestment-grade	53,175	55,208	16,439	17.153	11,980	11,284	. 393	445	9,753	9,777	91,740	93.867
Total retained loans	$121,317	$120,895	$109,904	$105,802	$35,685	$ 35,578	$15,994	$ 16,380	$111,526	$ 105,135	$394,426	$ 383,790
% of total criticized exposure to *total retained loans*	*5.31%*	*6.35%*	*0.89%*	*0.94%*	*0.98%*	*0.59%*	*-%*	*0.04%*	*0.33%*	*0.40%*	*2.06%*	*2.43°/*
% of criticized nonaccrual to total retained loans	0.97	1.23	0.14	0.19	0.08	0.03	-	- .	0.25	0.24	0.41	0.51
Loans by geographic distribution"'												
Total non-U.S.	$ 29,631	$ 30,563	$ 2,936	$ 3,302	$15,165	$15,147	$ 3,634	$ 3,726	$ 41,987	$ 38,776	$ 93,353	$ 91.514
Total U.S.	91,686	90.332	106,968	102,500	20.520	20.431	12,360	12,654	69,539	66,359	301,073	292.276
Total retained loans	$121,317	$120,895	$109,904	$105,302	$35,685	$ 35,578	$ 15,994	$ 16,380	$111,526	$105,135	$394,426	$ 383,790
Loan delinquency"".												
Current and less than 30 days past due and Still accruing	$119,863	$119,050	$109,612	$105,396	$35,565	$ 35,523	$ 15,988	$ 16,269	$110,313	$104,280	$391,341	$ 380,518
30-89 days past due and Still accruing	192	268	130	204	74	25	1	107	932	582	1,329	1,136
90 or more days past due and Still accruing"'	86	86	10	2	16	21	5	4	5	19	122	132
Criticized nonaccrual	1,176	1.491	152	200	30	9			276	254	1,634	1.954
Total retained loans	$121,317	$120,895	$109,904	$ 105,802	$35,685	$ 35,578	$ 15,994	$ 16,380	$111,526	$ 105,135	$394,426	$ 383,790

a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring ol an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. For further discussion, see Note 14 of JPMorgan Chase's 2016 Annual Report.
c) Represents loans that are considered well-collateralized and therefore still accruing interest.
d) Includes loans to: individuals: SPEs; and private education and civic organizations. For more information on SPEs. see Note 16 of JPMorgan Chase's 2016 Annual Report.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. For further information on real estate loans, see Note 14 of JPMorgan Chase's 2016 Annual Report.

Real estate retained loans	$ 75,542	$ 72.143	$ 34,362	$ 33,659	$ 109,904	$ 105,802
Criticized exposure	457	539	521	459	978	998
% of total criticized exposure to total real estate retained loans	0.60%	0.75%	1.52%	1.36%	0.89%	0.94%
Criticized nonaccrual	$ 45	$ 57	$ 107	$ 143	$ 152	$ 200
% of criticized nonaccrual loans to total real estate retained loans	0.06%	0.08%	0.31%	0.42%	0.14%	0.19%

Wholesale impaired loans and loan modifications

Wholesale impaired loans consist of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 of JPMorgan Chase's 2016 Annual Report.

The table below sets forth information about the Firm's wholesale impaired loans.

:' Commercial . „. and.industrial.
. Financial' ..'institutions'
•; ^Government'-; *. '^afjencies' . '..

i (in millions) ■

Impaired loans With an allowance without an allowance[1]"

$ 942 $ 1,127 $ 84 $ 124 $ S j

369 414 75 87 9

$ 211 $ 180 $ 1,242 $ 1.440

65 76 518 577

S 1.311 $ 1,541 $ 159 $ 211 $ 14 $ 9 $

Allowance for loan losses related to impaired loans $ 259 $ 260 $

Unpaid principal balance of

impaired loans'" 1,566 1.754

9$ 18$ 14$ 3$ -$

237 295 14 12

63 $ 61 $ 345 $ 342

214 284 2,031 2,345

a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
b) Represents the contractual amount of principal owed at June 30, 2017, and December 31. 2016. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.
c) Based upon the domicile of the borrower, largely consists of loans in the U.S.

The following table presents the Firm's average impaired loans for the periods indicated.

^ ' ' ' ". ;;^'";^1 C-i»hgj6.j.. 7:Z-:; :Zf jP^&J

Commercial and industrial	$ 868	$ 1,704	$ 982	$ 1,413
Real estate	149	235	161	234
Financial institutions	4	11	4	11
Government agencies	-	-	-	
Other	209	194	205	189
Total[1]"	$ 1,230	$ 2,144	$ 1,352	$ 1,847

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were $745 million and $733 million as of June 30, 2017, and December 31, 2016, respectively.

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the three and six months ended June 30. 2017 and 2016.

Note 12 - Allowance for credit losses

For detailed discussion of the allowance for credit losses and the related accounting policies, see Note 15 of JPMorgan Chase's 2016 Annual Report. During the second quarter of 2017, the Firm refined its loss estimates relating to the wholesale portfolio by incorporating the use of internal historical data versus external credit rating agency default statistics to estimate PD. In addition, an adjustment to the modeled loss estimates for wholesale lending-related commitments was incorporated similar to the adjustment applied for wholesale loans. The impacts of these refinements were not material to the allowance for credit losses.

Allowance for credit losses and related information

The table below summarizes information about the allowances for loan losses and lending-related commitments, and includes a breakdown of loans and lending-related commitments by impairment methodology.

j Six months ended June 30; [(in millions) ' ;

Allowance for loan losses Beginning balance at January 1. Gross charge-offs Gross recoveries

4,034 2,223 (193)

Consumer, excluding ■. s creditcard .^Crediticard' ^

5,198 $ 1,105 (307)

<■• wholesale

4,544 $ 99 (69)

-Total.;.

13,776 3,427 (569)

::. "dk&,20J.6.

3,434 1.B74 (184)

Consumer, ■■ ..'« ,,'•... ; ..excluding ' ..'; . ',' ■' "'i •credit card. " Credit card/'.

5.806 688 (301)

Net charge-offs/(recoveries)

write-offs of PCI loans'" Provision for loan losses Other

46 448

(2)

(337) 2

46

2,491

88 316 (1)

88 3,052 (1)

5,646 $ 3,684 $ 4.897 $

Allowance for loan losses by impairment methodology									
Asset-specific'w	$ 296	$ 370	$ 345	$ 1.011	$ 365	$ 361	$ 525	$ 1,251	
Formula-based	2,239	4,014	3,834	10,087	2.627	3.323	4,372	10,322	
PCI	2,265	-	-	2.265	2.654	-	-		2.654
Total allowance for loan losses	$ 4,800	$ 4,384	$ 4,179	$ 13,363	S 5,646	$ 3.684	$ 4,897	$ 14,227	
Loans by impairment methodology									
Asset-specific	$ 8,340	$ 1,204	$ 1,760	$ 11,304	t 9,370	$ 1.307	$ 2.149	$ 12.826	
Formula-based	323,711	138,831	392,663	855,205	313,320	130.200	372,021	815,541	
PCI	33.064	-	3	33.067	38,360	-	4		38,364
Total retained loans	$ 365,115	$ 140,035	$ 394,426	$ 899,576	$ 361.050	$ 131.507	$ 374.174	$ 866,731	
Impaired collateral-dependent loans									
Net charge-offs !	$ 36	$ -	$ 16	$ 52	$ 43	$	$ 5	$ 48	
Loans measured at fair value of collateral less COSt to sell	2,234	-	296	2,530	2.431	-	295	2,726	
Allowance for lending-related commitments									
Beginning balance at January 1.	$ 26	$	$ 1,052	$ 1,078	{ 14	$ -	$ 772	J 786	
Provision for lending-related commitments	6	-	33	39	-	-	174	174	
Other	-	-	-	-	-	-	-		-
Ending balance at June 30,	$ 32	$ -	$ 1,085	$ 1,117	S 14	$	$ 946	$ 960	
Allowance for lending-related commitments by impairment methodology									
Asset-specific	$ - J>	-	$ 211	$ 211	$ -	$ -	$ 143	$ 143	
Formula-based	32	-	874	906	14	-	803		817
Total allowance for lending-related commitments	$ 32	$	$ 1,085	$ 1,117	$ 14	t	$ 946	$ 960	
Lending-related commitments by impairment methodology									
Asset-specific	$ -		$ -	$ 750	$ 750	$ -$	-	$ 460	$ 460
Formula-based	58.162	576,264	365,748	1,000,174	59.224	539,105	356.685	955.014	

Total lending-related commitments	$ 58,162	$ 576,264	$ 366,498	$ 1,000,924	{ 59.224J 539,105	$ 357,145	$ 955.474

Note: In the first quarter of 2017. the Firm transferred the student loan portfolio to held-for-sale. For additional information see Note 23.

a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g.. upon liquidation).
b) includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.
c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

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Note 13 - Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1 of JPMorgan Chase's 2016 Annual Report.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment.

Credit card securitization trusts Mortgage securitization trusts

Mortgage and other securitization trusts

Multi-seller conduits

Investor intermediation activities

Securitization of both originated and purchased credit card receivables

Servicing and securitization of both originated and purchased residential mortgages

Securitization of both originated and purchased residential and commercial mortgages, and student loans

Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 141 of this Note.

Significant Firm-sponsored VIEs Credit card securitizations

For a more detailed discussion of JPMorgan Chase's involvement with credit card securitizations, see Note 16 of JPMorgan Chase's 2016 Annual Report.

As a result of the Firm's continuing involvement, the Firm is considered to be the primary beneficiary of its Firm-sponsored credit card securitization trusts, including its primary vehicle, the Chase Issuance Trust. See the table on page 142 of this Note for further information on consolidated VIE assets and liabilities.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including student loans) primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/ or retain certain beneficial interests in the securitization trusts.

For a detailed discussion of the Firm's involvement with Firm-sponsored mortgage and other securitization trusts, as well as the accounting treatment relating to such trusts, see Note 16 ofJPMorgan Chase's 2016 Annual Report.

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The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests, recourse or guarantee arrangements, and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 143 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and page 143 of this Note for information on the Firm's loan sales to U.S. government agencies.

i .■■ i.

r

|June.30, .2017 (in millions)

Securitization-related'"

Residential mortgage:

Prime/Alt-A and option ARMs

Subprime Commercial and other™

Principal amount .outstanding

■ Assets held in consolidated securitization ,.'" VIEs '■.

'Assets-held in nonconsolidated ' securitization' V VIEs with , °. continuing ..'involvement

3,927 $

71,894 $

20,241

93,625

95

JPMorgan Chase interest inisecuritized * assetsjih.'.nqnconsoi^ "

. ,.'■.. * ■ totaTinte'rests'

- ". •..' •■ . • held by ': '

Trading - ,. AFS . .„' ./JPMorgan .• -'-■assets; ^securities. ,.l\:£tCtese>jj<^,

209 $ 1,121 $ 1,330

99 - 99

605 1,553 2,158

913 $ 2,674 $

^vJPMbrgan Chaseiinterest'in securitized:;.* 0|

ft??*.. - ■.l.-**-'.5- •

i·peEembef-3i,?2pi6.(ih:mi!lion's)i

Securitization-related'*1

Residential mortgage:

Prime/Alt-A and option ARMs

Subprime Commercial and other""

Total

4,209 $ 107

57,543 19,903 71,464

. '- Asseis held in,! '•■ Assets" \ nonconsolidated. -'•'■ u-.... • .-. f fheld'iri;;.■■■'rf*'?senirittatibhi-' - M<m.:' ,'i.-. Consolidated1, VIEs with . /•?S?«#j? attonlecuritiatibh .V/V continuing - .;• •■ 7 VS!s£*a&1, ->•• V.S? t '<■■* 7i:r- iipvqlyenjbnt .;w

4,316 $

76.789 $ 21,542 101,265

$ 199,596 $

a) Excludes U.S. government agency securitizations and re-securitizations, which are not Firm-sponsored. See page 143 of this Note for information on the Firm's loan sales to U.S. government agencies.
b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties.
c) Excludes the following: retained servicing (see Note 14 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 4 for further information on derivatives); senior and subordinated securities of $119 million and $44 million, respectively, at June 30, 2017, and $180 million and $49 million, respectively, at December 31, 2016, which the Firm purchased in connection with CIB's secondary market-making activities.
d) Includes interests held in re-securitization transactions.
e) Asof June 30, 2017, and December 31, 2016, 63% and 61%, respectively, of the Firm's retained securitization interests, which are carried at fair value and include amounts required to be held pursuant to credit risk retention rules, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $1.3 billion and $1.5 billion of investment-grade and $37 million and $77 million of noninvestment-grade retained interests at June 30, 2017, and December 31, 2016, respectively. The retained interests in commercial and other securitizations trusts consisted of $1.9 billion and $2.4 billion of investment-grade and $242 million and $210 million of noninvestment-grade retained interests at June 30, 2017, and December 31, 2016, respectively.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. For a more detailed description of the Firm's involvement with residential mortgage securitizations, see Note 16 of JPMorgan Chase's 2016 Annual Report. See the table on page 142 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. For a more detailed description of the Firm's involvement with commercial mortgage and other consumer securitizations, see Note 16 of JPrVlorgan Chase's 2016 Annual Report. See the table on page 142 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations

For a more detailed description of JPMorgan Chase's participation in certain re-securitization transactions, see Note 16 ofJPMorgan Chase's 2016 Annual Report.

The following table represents the transfers of securities to re-securitization VIEs.

Transfers of securities to VIEs				
Firm-sponsored private-label	$ -	$ 144	$ -	$ 144
Agency	$ 1,462	$ 3.494	$ 4,686	$ 6.350

The following table represents information on nonconsolidated re-securitization VIEs.

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FH.-'- is-*-"i \,-fiy i<-c, ̇--'f': June'3)0;,■■ -'December'sJ>$ ffinirijiilj^			
Firm-sponsored private-label			
Assets held in VIEs with continuing involvement[1]"	J	651	$ 875
Interest in VIEs		31 43	
Agency			
Interest in VIEs		1,876	1,986

(a) Includes the notional amount of interest-only securities.

As of June 30, 2017, and December 31, 2016, the Firm did not consolidate any Firm-sponsored private-label re-securitizations and agency re-securitizations.

Multi-seller conduits

For a more detailed description of JPMorgan Chase's principal involvement with Firm-administered multi-seller conduits, see Note 16 of JPMorgan Chase's 2016 Annual Report.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $22.1 billion and $21.2 billion of the commercial paper issued by the Firm-administered multi-seller conduits at June 30, 2017, and December 31, 2016 respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $8.2 billion and $7.4 billion at June 30, 2017, and December 31, 2016, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 19.

VIEs associated with investor intermediation activities Municipal bond vehicles

For a more detailed description of JPMorgan Chase's investor intermediation activities, see Note 16 of JPMorgan Chase's 2016 Annual Report.

The Firm's maximum exposure as a liquidity provider to nonconsolidated Firm-sponsored municipal bond VIEs at June 30, 2017 and December 31, 2016, was $161 million and $662 million, respectively.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of June 30, 2017, and December 31, 2016.

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^?A-.:,; ••^-f*i^^:' .••<-"•<.'?<?.>• / v :>-",.- ^-Vs^^^*^ ': - Benefiaal. •.. .• ^...^J- -•',;.' '.?'•. j

41,997 25,039

3,976

VIE program type[1]"

Firm-sponsored credit card trusts Firm-administered multi-seller conduits Municipal bond vehicles Mortgage securitization entities"" Student loan securitization entities'" Other

25,749 2,957 1,695 679

245

25,732 2,928 1,693 406

139

17 29 2

273 106

• •• >^'/.'••.,: • -:':..*;7:-:-%>vV " .. Totair ... •■interestsin ;■ ;.;St-^p-'7ptal.-'q !§!^JfeiPli^r^^1^ji'-.{Ti^jIg^gB^vj, fry tipans"

■AOtherfe. ^assets!^ ^jME-^ssets^' 7X7'7^Pffiei^^.Ojguariitjes^j

2

2,534 90

62

711$, 42,708

4325,084

6 2,540

2,049

724,138

427 $ 31,325

Total

1,987

2,688 $ 71,012 $ 2,819 $ 76,519 $ 30,898 $

•'Liabilities"

K. \ " \b^k"*• • "' '.". ••.••: ..'v^i^^r ^;. /•Beneficiai ~ ' ' >•.' [1]

* •'> .■• " ':• • . :••' = '|rf'i>.:.'::2'X "' 'V" '* ■• '■' :. ■" ■ Total.':' .» interests in .. ;. ° "

|DecemJ^3i^gr6(

45.919 23,760

4.246 1,689

31.181 2.719 2,969 468 1,527 183

790 43 8

103 59 2,318

46,709 23,803 2,905 4,492 1,748 2,463

VIE program type'"

2,897 143

145

Firm-sponsored credit card trusts Firm-administered multi-seller conduits Municipal bond vehicles Mortgage securitization entities"" Student loan securitization entities'0 Other

^JiabiJUiffif.,2|

$ 31,199 2,752 2,971

781 1,531

303

3,185 $ 75.614 $ 3.321 $ 82,120 $ 39,047

a) Excludes intercompany transactions which are eliminated in consolidation.
b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
c) The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio. For additional information see Note 23.
d) Includes assets classified as cash and other assets on the Consolidated balance sheets.
e) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
f) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated VIEs." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $26.3 billion and $33.4 billion at June 30, 2017, and December 31. 2016, respectively. The maturities of the long-term beneficial interests as of June 30. 2017. were as follows: $10.6 billion under one year, $14.5 billion between one and five years, and $1.2 billion over five years.
Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.
(g)

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, student and commercial (primarily related to real estate) loans. For a further description of the Firm's accounting policies regarding securitizations, see Note 16 of JPMorgan Chase's 2016 Annual Report.

Securitization activity

The following table provides information related to the Firm's securitization activities for the three and six months ended June 30, 2017 and 2016, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

-Three months ended June.30,

' 2016

Residential Commercial, , mortgage1?' and other!01; *
Residential •> Commercial . Residential;: "Commercial mortgage1" and other*01 ;. -.mortgage1" .and other'?'
.'Residential ; Commercial ? mortgage10 ".; and other"" •

Principal securitized

All cash flows during the period13':

Proceeds from loan sales as securities

Level 2

Level 3

1,020 $ 1,997

1,048 $ 2,029 - $

413 $ 1,034 $ 2,049 $ 3,312 $
413 $
3,377
2,083

1.062 $ 2 $

2,358

2.373 2

Total proceeds received from loan sales

Servicing fees collected

Purchases of previously transferred financial assets (or the underlying collateral)""

Cash flows received on interests

1,048 $ 2,029 134 1

128 206

413 S 111

111

1,064 1

307

2,083 $ 267

1

259

3.377 2

541

413 223

37 205

2.375 1

580

a) Excludes re-securitization transactions.
b) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities - for example, loan repurchases due to representation and warranties and servicer clean-up calls.
c) Includes prime, Alt-A, subprime. and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.
d) Includes commercial mortgage and student loan securitizations.

Loans and excess MSRs sold to U.S. government-sponsored enterprises, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. government-sponsored enterprises ("U.S. GSEs"). These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 19 of this Form 10-Q, and Note 29 of JPMorgan Chase's 2016 Annual Report for additional information about the Firm's loan sales- and securitization-related indemnifications. See Note 14 for additional information about the impact of the Firm's sale of certain excess MSRs. The following table summarizes the activities related to loans sold to the U.S. GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

	Three months ended June 30,		Six months ended June 30,	
(in millions)	2017	2016	2017	2016
Carrying value of loans				

sold	$ 11,711	$ 8.824	$ 28,880	$ 17.836
Proceeds received from loan sales as cash	4	234		13 238
Proceeds received from loan sales as securities[13']	11,602	8,548	28,589	17,503
Total proceeds received from loan sales""	$ 11,606	$ 8,782	$ 28,602	$ 17,741
Gams on loan sales[11]'""	$ 42	$ 64	$ 73	$ 114

a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.
b) Excludes the value of MSRs retained upon the sale of loans.
c) Gains on loan sales include the value of MSRs.
d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

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The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage loans recognized on the Firm's Consolidated balance sheets as of June 30, 2017 and December 31, 2016. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

!■-* " >>.;·- 'V:7 ■ . o June 30,.. • Dec31,:'
((in.miljions) .7 .\;'. „'.;1^ vfoi?,,.,, ..,2016;

Loans repurchased or option to repurchase[13']	$ 8,744	$ 9,556
Real estate owned	105	142
Foreclosed government-guaranteed residential mortgage loans""	762	1,007

a) Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.
b) Relates to voluntary repurchases of loans, which are included in accrued interest and accounts receivable.

Options to repurchase delinquent loans In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 20, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. For additional information, refer to Note 11 of this Form 10-Q and Note 14 of JPMorgan Chase's 2016 Annual Report.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets held in Firm-sponsored private -label securitization entities, in which the Firm has continuing involvement, and delinquencies as of June 30, 2017, and December 31, 2016.

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^(in millions)^/ jiSl-A^ . Ly.." TW..**0*?:, ><7 ':l ?pib^x^PA?

Securitized loans Residential mortgage:								
Prime / Alt-A S option ARMS	$ 54,473	$ 57.543	$ 5,385	$ 6.169	$ 226	$ 318	$ 438	% 658
Subprime	18,758	19.903	3,662	4,186	201	296	376	618
Commercial and other	65,915	71,464	1,632	1,755	5	93	57	486
Total loans securitized	$ 139,146	$ 148,910	$ 10,679	$ 12,110	$ 432	% 707	$ 871	$ 1,762

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Note 14 - Goodwill and Mortgage servicing rights

For a discussion of the accounting policies related to goodwill and mortgage servicing rights, see Note 17 of JPMorgan Chase's 2016 Annual Report.

Goodwill

The following table presents goodwill attributed to the business segments.

IT *■:".'"' • '" ~;';' June30,' "'Decenrfberiivf

30,806 6,775 2,861 6,858

30,797 6.772 2.861 6,858

i-Gn;mfiMons)r.\ < / 7 -iv.*'-"■'.' 2017 "■ .20161

47,300 $

47.288

Consumer & Community Banking Corporate & Investment Bank Commercial Banking Asset & Wealth Management

Total goodwill

' ·,Six .mqhths;ended -;j >'•; ; June 3b..'. ;:' •'«

The following table presents changes in the carrying amount of goodwill.

'-, ' Three months ended '■■ < ■7 i . June 30,' ;s"^V

((ih;riiilli6ns)

$ 47,292 $47,310 $ 47,288 $ 47,325

Balance at beginning of period

(71) 49

Changes during the period from:

12

8

Dispositions'"

Other""

(7)

Goodwill impairment testing

For further description of the Firm's goodwill impairment testing, including the primary method used to estimate the fair value of the reporting units, and the assumptions used in the goodwill impairment test, see Impairment testing on pages 240-241 of JPMorgan Chase's 2016 Annual Report.

Goodwill was not impaired at June 30, 2017, or December 31, 2016, nor was goodwill written off due to impairment during the six months ended June 30, 2017 or 2016.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, estimates of adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

$ 47,300 $ 47,303 $ 47,300 $ 47.303

a) During the six months ended June 30, 2016, represents AWM goodwill, which was disposed of as part of AWM sales completed in March 2016.
b) Includes foreign currency translation adjustments and other tax-related adjustments.

Mortgage servicing rights

MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained. For a further description of the MSR asset, interest rate risk management, and the valuation of MSRs, see Note 17 ofJPMorgan Chase's 2016 Annual Report and Note 2 of this Form 10-Q.

The following table summarizes MSR activity for the three and six months ended June 30, 2017 and 2016.

j (in;hiilliqns, except where otherwise noted) _

Fair value at beginning of period MSR activity: Originations of MSRs Purchase of MSRs Disposition of MSRs[1]"

/As of or for the.threeimdnths ' ended June 30,; ■ 'Z

6,079

'. "2016

154

$ 5.658

(67)

113

(3)

.2017

As of or for the-six.months:. ended June 30; \"i

6,096

.,201-6')

371

% 6,608

(138)

220

(67)

Net additions

Changes due to collection/realization of expected cash flows

Changes in valuation due to inputs and assumptions: Changes due to market interest rates and other"" Changes in valuation due to other inputs and assumptions:

Projected cash flows (e.g.. cost to service)

Discount rates

Prepayment model changes and other[10]

(213)

(178) 2

(7) (17)

(419)

(121)

14

(19) (31)

(480)

(1.195)

(7) 7

(14)

Total changes in valuation due to other inputs and assumptions

Total changes in valuation due to inputs and assumptions

Fair value at June 30,

Change in unrealized gains/dosses) included in income related to MSRs held at June 30,	$ (200)	$ (457)	$ (157)	$ (1,209)
Contractual service fees, late fees and other ancillary fees included in income	477	545	964	1,106
Third-party mortgage loans serviced at June 30, (in billions)	569	632	569	632
Net servicer advances at June 30. (in billions)""	4.1	5.6	4.1	5.6

a) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.
b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
c) Represents changes in prepayments other than those attributable to changes in market interest rates.
d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

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The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the three and six months ended June 30, 2017 and 2016.

CCB mortgage fees and related income Net production revenue

Net mortgage servicing revenue:

Operating revenue: Loan servicing revenue

Changes in MSR asset fair value due to collection/realization of expected cash flows

152 $ 261 $ 293 $ 423

518 593 1,040 1,209

(212) (238) (417) (478)

Total operating revenue

Risk management:

Changes in MSR asset fair value due to market interest rates and other11'

Other changes in MSR asset fair value due to other inputs and assumptions in model""

Change in derivative fair value and other

(178)

(22) 143

(433)

(24) 530

(121)

(36) 48

(1,195)

(14) 1,411

Total risk management

Total net mortgage servicing revenue

Total CCB mortgage fees and related income

All other

Mortgage fees and related income

a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at June 30, 2017, and December 31, 2016, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

9.41% (231) (445)

9.62% $ (216) (415)

p:--:;-'-y/y:j' 7 . 7:^V'^.yuh|bV ;<>::.Dec,3ia

Weighted-average prepayment speed assumption ("CPR")		
Impact on fair value of 10% adverse change		
Impact on fair value of 20% adverse change		
Weighted-average option adjusted spread	9.18%	8.55%
Impact on fair value of a 100 basis point adverse change	$ (232)	$ (248)
Impact on fair value of a 200 basis point adverse change	(446)	(477)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which could either magnify or counteract the impact of the initial change.

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Note 15 - Deposits

For further discussion on deposits, see Note 19 of JPrVlorgan Chase's 2016 Annual Report.

At June 30, 2017, and December 31, 2016, noninterest-bearing and interest-bearing deposits were as follows.

Note 16 - Earnings per share

For a discussion of the computation of basic and diluted earnings per share ("EPS"), see Note 24 of JPMorgan Chase's 2016 Annual Report. The following table presents the calculation of basic and diluted EPS for the three and six months ended June 30, 2017 and 2016.

: V" ₜrV"", :'-:«' :%June 30, 7 ˢbecember3'Kj

S|riᵣfnillibns)'/

U.S. offices

Noninterest-bearing $ 394,921 $ 400.831

1,176,630

1,138,780

. Interest-bearing (included $14,285 and

$12,245 at fair value)[1]" 781,709 737,949

Total deposits in U.S. offices

Non-u.S. offices

Noninterest-bearing 17,152 14,764

262,843

236,399

Interest-bearing (included $3,469 and

$1,667 at fair value)[1]" 245,691 221,635

Total deposits

Total deposits in non-U.S. offices

$1,439,473 $ 1,375,179

(a) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 3 of JPMorgan Chase's 2016 Annual Report.

f(in millions; except fper shareiampunts).

Basic earnings per share

Net income

Less: Preferred stock dividends

Net income applicable to common equity

Less: Dividends and undistributed earnings allocated to participating securities'"

Net income applicable to common stockholders'"

Three months ended June.30;"

■2016

" six months ended; ' V June 30,: " J

'.2017' '-. V,*20I6l

2017 :

6,618

5,789

10.897

$ 7,029 $ 6.200 $ 13,477 $ 11,720

411 411 823 823

63

61

123

12,654

124

$ 6,555 $ 5,728 $ 12,531 $ 10,773

Total weighted-average basic shares outstanding'"

$ 1.83 $ 1.56 $ 3.49 $ 2.92

Diluted earnings per share

Net income applicable to common stockholders'"

Total weighted-average basic shares outstanding[a]

Add: Employee stock options, SARs, warrants and unvested PSUs

Total weighted-average diluted shares outstanding[a]

Net income per share

(a) The prior period amounts have been revised to conform with the current period presentation. The revision had no impact on the Firm's reported earnings per share.

Note 17 - Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

; As of or for the thfeeimoriths ended'rr. ; June-3a 2017 ■' .• "■.:/7r7 ,'{ih millions) -■; *

Balance at April l, 2017 Net change

• . unrealized gains ■ • ■i' on investment /. securities^"

$ 1,762 457

•.,-.•5.: '- ^^s v' Translation" ' ^ ': adjustments, , 7hetpf; hedges ':

$ (157)

(9) 53

(245) 2

■\. ; ;■. iv7>"perined.b'enefit~;;^b^ value" Cashflomt'^; ".pensionand^V"T6ptionelected;:'"." '■ hedges'^sV' O^B'blans^^' riiabilities ; >.

$ (2,274) 19

; Accumulated^. .;';■ ..other '£ "comprehensive income'/doss)-

(923) 531

Balance at June 30,2017

Us'of.of for thethree;montlis ended? rOune'30: 2016 ?.' " •' f(ih.miliighs)' & ■>

Balance at April 1, 2016 Net change

3,054 867

(164) 3

•v Unrealized' ..*;.• '. v"" "./. ■■ • '7-7 *' '•• 2» gains' * V" Translation';'.^ >*-.'-.'.: ' .'on investment" adjustments^-, ^, Cashflow' •- '•|eraritj«ws , ■net'fjJ,h^gesWf;"t^hedges.;'.

$ (114) (87)

212 (3)

782 836

. \,'-7o'Aaumulated'4 pefihe'd benefit'.'; DVA on fair value : other . " \ pension' and - >pptibn elected : . 'icbrn'prehehsivei OPEB plans.- ^s,; ' ;,'. - liabilities '7^"3[nGbriiey(loss): j

(2,206) 56

Balance at June 30, 2016

i As of or for the six mohths ehded •June 30, 2017 '= ','.;£." 7)'■<■■ ^injinij(ions). .j^.-.r'r-l^-i

Balance at January 1, 2017 Net change

eUnrealjze'd^'^^J;- •■., ; v'-vf , gaihs/Obsses); -. . A'Transladbhl' '■ ,pn,investment;.. . adjustments,

$ 1,524 695

("^ j, ^Dirities^^S; '^het'^qf- hedges';

$ (164) 7

(100) 144

(2,259) 4

(176) (67)

^;c^v,^,;.;•••••'•? pj^yvp; ■ :r^fcumulatedS y• >; .:* '° '< ' \befined.Benefif <file:///befined.Benefif> DyA on'fairvalue 5;;. other ':} Cash flow ^j. i pension^and- ^;,'.'.. //optiohielectedi-; '^.comprehensive'S ^ hedges 7'f.i'^b^

$ (1,175) 783

Balance at June 30,2017

Balance at January 1, 2016

Cumulative effect of change in accounting principle[1]"

Net change

NA

154 55

$ 192

154 1,272

Balance at June 30, 2016

a) Effective January 1, 2016, the Firm adopted new accounting guidance related to the recognition and measurement of financial liabilities where the fair value option has been elected. This guidance requires the portion of the total change in fair value caused by changes in the Firm's own credit risk (DVA) to be presented separately in OCI; previously these amounts were recognized in net income.
b) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS, including net unamortized unrealized gains and losses related to AFS securities transferred to HTM.

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The following table presents the pre-tax and after-tax changes in the components of OCI.

JThVee" mortis ehdetl'JunedOi.tih^Oons)

Unrealized gains/dosses) on investment securities:

Net unrealized gains/dosses) arising during the period

Reclassification adjustment for realized (gains)/losses included in net income'"

Net change

(259) (13)
(272)

Translation adjustments"' [1]:

Translation

Hedges

317 (319)

(117) 119

200 (200)

(10) 17

4
(8)

(6) 9

Net change

Cash flow hedges:

Net unrealized gains/dosses) arising during the period

Reclassification adjustment for realized (gains)/losses included in net income"1

23 65

(10) (25)

13 40

(187) 48

70 (18)

(117) 30

Net change

Defined benefit pension and OPEB plans:

Net gains/dosses) arising during the period Reclassification adjustments included in net income"1

Amortization of net loss

Prior service costsAcredits)

Foreign exchange and other

62 (9) (25)

(2)

(23) 4

39 (5) (19)

64 (9) 28

(3)

(25) 3

(10)

39 (6) 18

Net change

DVA on fair value option elected liabilities, net change:

851 $ (320) $ 531 $ 1.342 $ (506) $

■2017';^

jSix:months.;ehded;June ;3d:;dh.milBoris)-

Unrealized gains/dosses) on investment securities:

Net unrealized gains/dosses) arising during the period

Reclassification adjustment for realized (gains)/losses included in net income'31

Net change

Translation adjustments:" 1
Translation
Hedges

$ 1,062 $

37
1,099

899 (875)

(390) $ (14)
(404)

(342) 325
27
23
(72)

672 $ 2,140 $ (803) $ 1,337
2,068
(776)
1.292
(45)
579 (573)
(216) 211
363 (362)
695

557 (550)
Net change
Cash flow hedges;
Net unrealized gains/dosses) arising during the period
Reclassification adjustment for realized (gains)/losses included in net income[10]

82 150

(31) (57)

51 93

(354) 103

133 (39)

(221) 64

Net change
Defined benefit pension and OPEB plans:
Net gains/dosses) arising during the period Reclassification adjustments included in net income"[1]
Amortization of net loss
Prior service costs/tcredits)
Settlement (gain)/loss
Foreign exchange and other
Net change
(88)
19
232
(52)

124 (46)
(18) 7
(3) 1
19
(32) 4
(15)
144

(33)

78 (11) (2) (28)
(251)

(15)

128 (18)

34
129
94

(49) 7

(12)
(48)
(157)

(9)

79 (11)

22
81

DVA on fair value option elected liabilities, net change:

Total other comprehensive income/doss)

a) The pre-tax amount is reported in securities gains/(losses) in the Consolidated statements of income.
b) Reclassifications of pre-tax realized gains/dosses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.
c) The pre-tax amounts are predominantly recorded in net interest income in the Consolidated statements of income.
d) The pre-tax amount is reported in compensation expense in the Consolidated statements of income.

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Note 18 - Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar minimum capital requirements and standards for the Firm's national banks, including JPrVlorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and its IDI subsidiaries. Basel III sets forth two comprehensive approaches for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

There are three categories of risk-based capital under the Basel III Transitional rules: CETl capital, Tier 1 capital and Tier 2 capital. CETl capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined benefit pension and OPEB plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from NOL and tax credit carryforwards. Tier 1 capital predominantly consists of CETl capital as well as perpetual'" preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier

1 capital plus Tier 2 capital.

The following tables present the risk-based and leverage-based capital metrics for JPMorgan Chase and its significant national bank subsidiaries under both the Basel III Standardized Transitional and Basel III Advanced Transitional approaches at June 30, 2017, and December 31, 2016.

- Baselll standardized Transitional

•' JPMorganiChase S Go."

Jun 30. 2017

: Dec-31v.' .2016.
: Dec 31.,:
Jjj20V6;i

Basel-Ill Advanced. '■■<;. i ■ Transitional ,',-. : - H

Jun 30. ,

:;\;'^;.2pi_7 ,_

$ 182.967 $ 186,942 208,112 212,353 239.553 233,345

$ 186,942 212,353 243,061

1,478,816 2,512.120

12.6% 14.4 16.4 8.5

$ 182,967 208.112 228.592

1.476.915 2,484.631

12.4% 14.1 15.5 8.4

Regulatory capital

CETI capital

Tier 1 capital"1

1,464.981 2.484,631

12.5* 14.2 16.4 8.4

1,459,196 2,512,120

12.8% 14.6 16.0 8.5

Total capital

Assets

Risk-weighted

Adiusted average""

Capital ratios10 CETI Tier l1" Total

- Basel 1)1 Standardized' . transitional"> u

Baselitl Advanced^',*'

/S^TS^i^S™!Vt:"'.,'

Jun 30'i.. ' •■'■ I •Dec 3i; -.. '.'^oVJunSO,'1; ■ s :'Dec~31;-i,
2016 :

Tier 1 leverage""

Regulatory capital

CETI capital

Tier 1 capital1"

Total capital

$ 184,141 $ 179,319 $ 184,141 4 179.319

184,141 179,341 184,141 179.341

195,851 191.662 189,381 184.637

Assets

Risk-weighted

Adjusted average""

1,304,939 2,107,302

1,293.203 2.088.851

1,245,670 2,107,302

1,262.613 2,088.851

Capital ratios"[1] CETI Tier I"[1] Total

Tier 1 leverage""

14.1% 14.1 15.0 8.7

13.9% 13.9 14.8 8.6

14.8% 14.8 15.2 8.7

14.2% 14.2 14.6 8.6

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; Jun 30, -: ' 2017; ::
Dec 31. .2016
- Jun 30,

.2017

2016
I (inmillibnv t-ex'cept' ratios);

$ 16,784 16.784 22.862

112,297 120,304

14.9% 14.9 20.4 14.0

$ 19,647 19,647 24,297

194,110 122,880

10.1% 10.1 12.5 16.0

$ 19,647 19,647 25.684

109,002 122,880

18.0% 18.0 23.6 16.0

$ 16.784 16,784 21.434

186.378 120.304

9.0% 9.0 11.5 14.0

Regulatory capital

CETl capital

Tier 1 capital[1]"

Total capital

Assets

Risk-weighted

Adiusted average""

Capital ratios"' CETl Tier 1'" Total

Tier l leverage""

a) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule) acquired after December 31, 2013. The deduction was not material as of June 30, 2017 and December 31, 2016.
b) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/dosses) on AFS securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to NOL and tax credit carryforwards.
c) For each of the risk-based capital ratios, the capital adequacy of the Firm and its national bank subsidiaries is evaluated against the lower of the two ratios as calculated under Basel III approaches (Standardized or Advanced) as required by the Collins Amendment of the Dodd-Frank Act (the "Collins Floor").
d) The Tier l leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CETl, Tier 1 and Total capital to RWA, as well as a minimum leverage ratio (which is defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. National bank subsidiaries also are subject to these capital requirements by their respective primary regulators. The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of June 30, 2017.

	.Minimum capital ratios-		Well-rapitalized'ratios ',!	
Capital ratios				
CETl	7.50%	5.75%	-%	6.5%
Tier 1	9.00	7.25	6.0	8.0
Total	11.00	9.25	10.0	10.0
Tier 1 leverage	4.0	4.0	-5.0	

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its national bank subsidiaries are subject.

a) Represents the Transitional minimum capital ratios applicable to the Firm under Basel III at June 30. 2017. At June 30, 2017, the CETl minimum capital ratio includes 1.25% resulting from the phase in of the Firm's 2.5% capital conservation buffer and 1.75%. resulting from the phase in of the Firm's 3.5% GSIB surcharge.
b) Represents requirements for JPMorgan Chase's banking subsidiaries. The CETl minimum capital ratio includes 1.25% resulting from the phase in of the 2.5% capital conservation buffer that is applicable to the banking subsidiaries. The banking subsidiaries are not subject to the GSIB surcharge.
c) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
d) Represents requirements for bank subsidiaries pursuant to regulations issued under the FDIC Improvement Act.
e) For the period ended December 31, 2016 the CETl, Tier 1, Total and Tier 1 leverage minimum capital ratios applicable to the Firm were 6.25%, 7.75%, 9.75% and 4.0% and the CETl, Tier 1, Total and Tier 1 leverage minimum capital ratios applicable to the Firm's banking subsidiaries were 5.125%. 6.625%, 8.625% and 4.0% respectively.

As of June 30, 2017, and December 31, 2016, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 19 - Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn upon or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements. For further discussion of lending-related commitments and guarantees, and the Firm's related accounting policies, see Note 29 of JPMorgan Chase's 2016 Annual Report.

To provide for probable credit losses inherent in wholesale and certain consumer lending-related commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 12 for further information regarding the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at June 30, 2017, and December 31, 2016. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there has been a demonstrable decline in the creditworthiness of the borrower.

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Off-balance sheet lending-related financial instruments, guarantees and other commitments

j.By/femaming maturity ,V(iri. millions) ,

Lending-related

Consumer, excluding credit card: Home equity Residential mortgage™1" Auto

Consumer & Business Banking1"1
./after " .after-

GjotalQ
.V;uT6tal!.
^ Expires in,I year- ;.years . Expires ;,
• 1 year or "through -"^'through afters
: less _ ' 3 years/'?,' .5' years ' , years '• ."■

$ 3,927 $ 1,929 $ 1,287$ 14,169$ 21,312 $ 21.714 $ 11 $
14,828 --1114,83911.882
7,174 996173 788,4218,468 2
12,023 938111 51813,59012,733 19

12

2 12
$ 37,952 $ 3,863 $ 1,571 $ 14,776 $ 58,162
$ 576,264 $ 553,891 $
$ 614,216 $ 3,863 $ 1,571 $ 14,776 $ 634,426 $ 608,688 $ 32 $

Wholesale:

Other unfunded commitments to extend credit"1'

Standby letters of credit and other financial guarantees""

Other letters of credit""

$ 70,287 $ 112,057 $ 137,158 $ 10,585 $ 330,087 $ 328.497 $ 904 $ 905

15,264 9,930 6,988 1,140 33,322 35.947 621 586
2,754 233 101 1 3,089 3.570 4 2
$ 88,305 $ 122,220 $ 144,247 $ 11,726 $ 366,498 $ 368.014 $ 1,529 $ 1,493
$ 702,521 $ 126,083 $ 145,818 $ 26,502 $ 1,000,924 $ 976,702 $ 1,561 $ 1,519

Other guarantees and commitments

Securities lending indemnification agreements and guarantees'"	***$ 161,004 $***	***- $***	***- $***	
Derivatives qualifying as guarantees	**3,569**	**208**	**10,606 39,779**	
Unsettled reverse repurchase and securities borrowing agreements	98,140	-	- -	
Unsettled repurchase and securities lending agreements	80,583 -			
				NA NA 1,570
Loan sale and securitization-related indemnifications:				
Mortgage repurchase liability	NA	NA NA		
Loans sold with recourse	NA	NA NA		

Other guarantees and commitments" 1' 459 2,484 1,012

161,004 54,162
98,140

80,583

NA 1,814 5,525

137,209 $ 51,966 378

50,722

26,948

NA

2.730 5,715

80

133 64 (118)

a) Includes certain commitments to purchase loans from correspondents.
b) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.
c) Predominantly all consumer lending-related commitments are in the U.S.
d) At June 30, 2017. and December 31, 2016, reflected the contractual amount net of risk participations totaling $361 million and $328 million, respectively, for other unfunded commitments to extend credit; $10.7 billion and $11.1 billion, respectively, for standby letters of credit and other financial guarantees; and $334 million and $265 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
e) At June 30, 2017. and December 31, 2016. the U.S. portion of the contractual amount of total wholesale lending-related commitments was 77% and 79%. respectively.
f) At June 30, 2017, and December 31, 2016, collateral held by the Firm in support of securities lending indemnification agreements was $169.2 billion and $143.2 billion, respectively. Securities lending collateral primarily consists of cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development and U.S. government agencies.
g) Included unfunded commitments of $41 million and $48 million at June 30, 2017, and December 31, 2016, respectively to third-party private equity funds: and $918 million and $1.0 billion, at June 30, 2017, and December 31, 2016, respectively, to other equity investments. These commitments included $30 million and 134 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 2. In addition, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.5 billion and $4.6 billion at June 30, 2017, and December 31, 2016, respectively.
h) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability: for derivative-related products, the carrying value represents the fair value.

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Other unfunded commitments to extend credit Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure arises under secured clearance advance facilities that the Firm extends to its clients (i.e., cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. As of June 30, 2017, and December 31, 2016, the maximum outstanding commitment under the secured clearance advance facility was $1.6 billion and $2.4 billion, respectively.

Standby letters of credit and other financial guarantees

Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions.

The following table summarizes the standby letters of credit and other letters of credit arrangements as of June 30, 2017, and December 31, 2016.

Standby letters of credit, other financial guarantees and other letters of credit

Investment-grade"1 Noninvestment grade a

26,592 6,730

2,245 844

December 31>2016

28,245 7,702

2,781 789

Total contractual amount

Allowance for lending-related commitments Guarantee liability

177 444

145 441

Total carrying value

Commitments with collateral

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.

Derivatives qualifying as guarantees

The Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. For further information on these derivatives, see Note 29 of JPrVlorgan Chase's 2016 Annual Report.

The following table summarizes the derivatives qualifying as guarantees as of June 30, 2017, and December 31, 2016.

Total notional value of derivatives'"	54,162 51,966	
Notional amount of stable value contracts""	28,892 28,665	
Maximum exposure to loss on stable value contracts	3,031 3,012	
Fair value1"		
Derivative payables	393 96	
Derivative receivables	15	f 6

a) The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees.
b) Exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount.
c) The fair value of the contracts reflect the probability, in the Firm's view, of whether the Firm will be required to perform under the contract.

The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 4.

Loan sales- and securitization-related indemnifications

In connection with the Firm's mortgage loan sale and securitization activities with GSEs and in certain private label transactions, the Firm has made representations and warranties that the loans sold meet certain requirements, and that may require the Firm to repurchase the mortgage loans and/or indemnify the loan purchaser if such representations and warranties are breached by the Firm. In addition, although the Firm's securitizations are predominantly nonrecourse, the Firm does provide recourse servicing in certain limited cases where it agrees to share credit risk with the owner of the mortgage loans. For additional information, see Note 29 of JPMorgan Chase's 2016 Annual Report.

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves. For additional information regarding litigation, see Note 21 of this Form 10-Q and Note 31 ofJPMorgan Chase's 2016 Annual Report.

Guarantees of subsidiary

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company, and these guarantees rank on a parity with the Firm's unsecured and unsubordinated indebtedness.

Note 20 - Pledged assets and collateral

For a discussion of the Firm's pledged assets and collateral, see Note 30 ofJPMorgan Chase's 2016 Annual Report.

Pledged assets

The Firm may pledge financial assets that it owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, collateralize repurchase and other securities financing agreements, and cover customer short sales. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets.

The following table presents the Firm's pledged assets.

t(in binidns)	J.;r},';,fl: ^i./S&.^y.zmj^'^	£l²PA<h'
Assets that may be sold or repledged or otherwise used by secured parties	$ 154.3	$ 133.6
Assets that may not be sold or repledged or otherwise used by secured parties	60.4	53.5
Assets pledged at Federal Reserve banks and FHLBs	478.2	441.9
Total assets pledged	$ 692.9	$ 629.0

Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 13 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities, see Note 10. For additional information on the Firm's long-term debt, see Note 21 of JPMorgan Chase's 2016 Annual Report.

Collateral

The Firm had accepted financial assets as collateral that it could sell or repledge, deliver or otherwise use. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Collateral was generally used under repurchase agreements, securities lending agreements or to cover customer short sales and to collateralize deposits and derivative agreements.

The following table presents the fair value of collateral accepted.

)••-' ' ~y.yj i(w;falllipns)..I'.-,;' ..	V'*'/'Tjune 30;"": ^1:1'i^Z^y'^	^Decem8er3i,j ^.?9lP.l
Collateral that could be sold or repledged, delivered, or otherwise used	$ 972.2	$ 914.1
Collateral sold, repledged, delivered or otherwise used	779.8	746.6

Note 21 - Litigation

Contingencies

As of June 30, 2017, the Firm and its subsidiaries and affiliates are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $1.9 billion at June 30, 2017. This estimated aggregate range of reasonably possible losses was based upon currently available information for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given the number, variety and varying stages of the proceedings (including the fact that many are in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect. In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. FX-related investigations and inquiries by government authorities, including competition authorities, are ongoing, and the Firm is cooperating with those matters. In May 2015, the Firm pleaded guilty to a single violation of federal antitrust law. In January 2017, the Firm was sentenced, with judgment entered thereafter. The Department of Labor granted the Firm a temporary one-year waiver of disqualification, effective upon entry of judgment, that allows the Firm and its affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA"). The Firm's application for a lengthier exemption is pending. Separately, in February 2017 the South Africa Competition Commission referred its FX investigation of the Firm and other banks to the South Africa Competition Tribunal, which has initiated civil proceedings.

The Firm is also one of a number of foreign exchange dealers defending a class action filed in the United States District Court for the Southern District of New York by U.S.-based plaintiffs, principally alleging violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action"). In January 2015 the Firm entered into a settlement agreement in the U.S. class action. Following this settlement, a number of additional putative class actions were filed seeking damages for persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (the "consumer action"), participants or beneficiaries of qualified ERISA plans (the "ERISA actions"), and purported indirect purchasers of FX instruments (the "indirect purchaser action"). Since then, the Firm has entered into a revised settlement agreement to resolve the consolidated U.S. class action, including the exchange-based actions, and that agreement has been preliminarily approved by the Court. The District Court has dismissed one of the ERISA actions, and the plaintiffs have filed an appeal. The consumer action, a second ERISA action and the indirect purchaser action remain pending in the District Court.

In September 2015, two class actions were filed in Canada against the Firm as well as a number of other FX dealers, principally for alleged violations of the Canadian Competition Act based on an alleged conspiracy to fix the prices of currency purchased in the FX market. The first action was filed in the province of Ontario, and sought to represent all persons in Canada who transacted any FX instrument. The second action was filed in the province of Quebec, and sought authorization to represent only those persons in Quebec who engaged in FX transactions. In late 2016 the Firm settled the Canadian class actions, and both settlements have received judicial approval.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid based on the filing of a UCC-3 termination statement relating to the Term Loan. In January 2015, following several court proceedings, the United States Court

of Appeals for the Second Circuit reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. The proceedings in the Bankruptcy Court continue with respect to, among other things, additional defenses asserted by JPrVlorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan that was unaffected by the filing of the termination statement at issue. In connection with that additional collateral, a trial in the Bankruptcy Court regarding the value of certain representative assets concluded in May 2017, and a ruling is pending. In addition, certain Term Loan lenders filed cross-claims against JPMorgan Chase Bank, N.A. in the Bankruptcy Court seeking indemnification and asserting various claims.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. The parties entered into an agreement to settle the cases for a cash payment of $6.1 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provided for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. In December 2013, the District Court granted final approval of the settlement.

A number of merchants appealed to the United States Court of Appeals for the Second Circuit, which, in June 2016, vacated the District Court's certification of the class action and reversed the approval of the class settlement. Both the plaintiffs and the defendants filed petitions seeking review by the U.S. Supreme Court of the Second Circuit's decision, and those petitions were denied in March 2017. The case has been remanded to the District Court for further proceedings consistent with the appellate decision.

In addition, certain merchants have filed individual actions raising similar allegations against Visa and MasterCard, as well as against the Firm and other banks, and those actions are proceeding.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the U.S. Department of Justice ("DOJ"), the U.S. Commodity Futures Trading Commission ("CFTC"), the U.S. Securities and Exchange Commission ("SEC") and various state attorneys general, as well as the European Commission ("EC"), the U.K. Financial Conduct Authority ("FCA"), the Canadian Competition Bureau, the Swiss Competition Commission ("ComCo") and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR"), as well as processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods. The Firm is responding to and continuing to cooperate with these inquiries. As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In December 2016, the Firm resolved ComCo inquiries relating to these same rates. ComCo's investigation relating to EURIBOR, to which the Firm and other banks are subject, continues. In December 2016, the EC issued a decision against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. The Firm has filed an appeal with the European General Court. In June 2016, the DOJ informed the Firm that the DOJ had closed its inquiry into LIBOR and other benchmark rates with respect to the Firm without taking action. Other inquiries have been discontinued without any action against JPMorgan Chase, including by the SEC, FCA and the Canadian Competition Bureau.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and putative class actions filed in various United States District Courts. These actions have been filed, or consolidated for pre-trial purposes, in the United States District Court for the Southern District of New York. In these actions, plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR, EURIBOR, Singapore Interbank Offered Rate ("SIBOR"), Singapore Swap Offer Rate ("SOR") and/or the Bank Bill Swap Reference Rate ("BBSW") by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes in U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR, EURIBOR, SIBOR, SOR or BBSW and assert a variety of claims including antitrust claims seeking treble damages. These matters are in various stages of litigation.

The Firm has agreed to settle the putative class actions related to Yen LIBOR, Euroyen TIBOR and Swiss franc LIBOR. Those settlements are subject to further documentation and approval by the Court.

In the EURIBOR action, the District Court dismissed all claims except a single antitrust claim and two common law claims, and dismissed all defendants except the Firm and Citibank.

In the U.S. dollar LIBOR-related actions, the District Court dismissed certain claims, including the antitrust claims, and permitted other claims under the Commodity Exchange Act and common law to proceed. In May 2016, the United States Court of Appeals for the Second Circuit vacated the dismissal of the antitrust claims and remanded the case to the District Court to consider, among other things, whether the plaintiffs have standing to assert antitrust claims. In July

2016, JPrVlorgan Chase and other defendants again moved in the District Court to dismiss the antitrust claims, and in December 2016, the District Court granted in part and denied in part defendants' motion, finding that certain plaintiffs lacked standing to assert antitrust claims. Those plaintiffs have filed an appeal. In May 2017, plaintiffs in three putative class actions moved in the District Court for class certification, and the Firm and other defendants have opposed that motion.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodity Exchange Act. In April 2016, the Firm settled the ISDAFIX litigation, along with certain other banks. Those settlements have been preliminarily approved by the Court.

Madoff Litigation. A putative class action was filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in a prior class action settlement. These plaintiffs alleged violations of the federal securities law, as well as other state and federal claims. The New Jersey court granted a transfer motion to the United States District Court for the Southern District of New York. The New York court granted the Firm's motion to dismiss, and the United States Court of Appeals for the Second Circuit has affirmed that dismissal. Plaintiffs have until September 2017 to file a petition for writ of certiorari with the United States Supreme Court. A similar action was filed in the United States District Court for the Middle District of Florida, although it was not styled as a class action, and included claims pursuant to Florida statutes. The Florida court granted the Firm's motion to dismiss the case, the United States Court of Appeals for the Eleventh Circuit affirmed the dismissal, and the United States Supreme Court denied plaintiffs' petition for writ of certiorari. In addition, the same plaintiffs have re-filed their dismissed state claims in Florida state court, where the action is stayed pending resolution of the federal court matters.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. The Firm and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of MBS. The remaining civil cases include one investor action and actions for repurchase of mortgage loans. The Firm and certain of its current and former officers and Board members have also been sued in a shareholder derivative action relating to the Firm's MBS activities, which remains pending.

Issuer Litigation - Individual Purchaser Actions. With the exception of one remaining action, the Firm has resolved all of the individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings).

Repurchase Litigation. The Firm is defending a number of actions brought by trustees, securities administrators and/ or master servicers of various MBS trusts on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. The Firm has reached a settlement with Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, and the Federal Deposit Insurance Corporation (the "FDIC") in connection with the litigation related to a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC, are in various stages of litigation.

In addition, the Firm and a group of 21 institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to 330 MBS trusts created between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The trustees (or separate and successor trustees) for this group of 330 trusts have accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance has received final approval from the court.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts sponsored by JPMC, Bear Steams and Washington Mutual.

In actions against the Firm involving offerings of MBS issued by the Firm, the Firm has contractual rights to indemnification from sellers of mortgage loans that were securitized in such offerings. However, certain of those indemnity rights may prove effectively unenforceable in various situations, such as where the loan sellers are now defunct.

The Firm has entered into agreements with a number of MBS trustees or entities that purchased MBS that toll applicable statute of limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Derivative Action. A shareholder derivative action against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors relating to the Firm's MBS activities is pending in California federal court. In June 2017, the court granted defendants' motion to dismiss the cause of action that alleged material misrepresentations and omissions in the Firm's proxy statement, found that the court did not have personal jurisdiction over the individual defendants with respect to the remaining causes of action, and transferred that remaining portion of the case to the United States District

Court for the Southern District of New York without ruling on the merits.

Government Enforcement Investigations and Litigation. The Firm is responding to an ongoing investigation being conducted by the DOJ's Criminal Division and two United States Attorney's Offices relating to MBS offerings securitized and sold by the Firm and its subsidiaries.

Mortgage-Related Investigations and Litigation. In January 2017, a Consent Order was entered by the United States District Court for the Southern District of New York resolving allegations by the Civil Division of the United States Attorney's Office for the Southern District of New York that the Firm violated the Fair Housing Act and Equal Credit Opportunity Act by giving pricing discretion to independent mortgage brokers in its wholesale lending origination channel which, according to the government's model, may have charged higher fees and interest rates to African-American and Hispanic borrowers than non-Hispanic White borrowers during the period between 2006 and 2009. The Firm denied liability, but agreed to pay a total of approximately $55 million to resolve this matter. In addition, three municipalities have commenced litigation against the Firm alleging violations of an unfair competition law or the Fair Housing Act. The municipalities seek, among other things, civil penalties for the unfair competition claim, and, for the Fair Housing Act claims, damages resulting from lost tax revenue and increased municipal costs associated with foreclosed properties. Two of the municipal actions were stayed pending an appeal to the United States Supreme Court. In May 2017, the Supreme Court held that the City of Miami has standing to bring claims under the Fair Housing Act, and remanded the case to the lower court to determine whether the City sufficiently alleged that the defendant's conduct proximately caused the alleged damages. In the two stayed municipal actions against the Firm, one remains stayed pending the resolution of the City of Miami case on remand, and in the other, the municipality has moved to reopen the case, which the Firm has opposed. The third municipal action against the Firm was stayed pending an appeal by the City of Los Angeles to the United States Court of Appeals for the Ninth Circuit in a related action. In May 2017, the Court of Appeals affirmed judgments against the City of Los Angeles and in favor of the defendants, and following that decision, the court has not yet lifted the stay in the action against the Firm.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment,
and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain putative transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. In January 2017, the Court substantially denied the defendants' motion to dismiss an amended complaint filed by the plaintiffs, and defendants' motion for leave to appeal that decision is pending.

Proprietary Products Investigations and Litigation. In December 2015, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC agreed to a settlement with the SEC, and JPMorgan Chase Bank, N.A. agreed to a settlement with the CFTC, regarding disclosures to clients concerning conflicts associated with the Firm's sale and use of proprietary products, such as J.P. Morgan mutual funds, in the Firm's CCB and AWM wealth management businesses, and the U.S. Private Bank's disclosures concerning the use of hedge funds that pay placement agent fees to JPMorgan Chase broker-dealer affiliates. The Firm settled with an additional government authority in July 2016, and continues to cooperate with inquiries from other government authorities concerning disclosure of conflicts associated with the Firm's sale and use of proprietary products. A putative class action, which was filed in the United States District Court for the Northern District of Illinois on behalf of financial advisory clients from 2007 to the present whose funds were invested in proprietary funds and who were charged investment management fees, was dismissed by the Court. The dismissal was affirmed on appeal. Plaintiffs have filed a petition for writ of certiorari with the United States Supreme Court, to which the Firm will respond.

Referral Hiring Practices Investigations. In November 2016, the Firm entered into settlements with DOJ, the SEC and the Board of Governors of the Federal Reserve System (the "Federal Reserve") to resolve those agencies' respective investigations relating to a former hiring program for

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candidates referred by clients, potential clients and government officials in the Asia Pacific region. Other related investigations are ongoing, and the Firm continues to cooperate with these investigations.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC and amended to include JPMorgan Chase Bank, N.A. as a defendant, asserting an estimated $6 billion to $10 billion in damages based upon . alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements. The case includes assertions that JPMorgan Chase Bank, N.A. may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. In June 2015, the court ruled in favor of JPMorgan Chase Bank, N.A. on the question of whether the Firm or the FDIC bears responsibility for Washington Mutual Bank's repurchase obligations, holding that JPMorgan Chase Bank, N.A. assumed only those liabilities that were reflected on Washington Mutual Bank's financial accounting records as of September 25, 2008, and only up to the amount of the book value reflected therein.

JPMorgan Chase also filed complaints in the United States District Court for the District of Columbia against the FDIC, in its corporate capacity as well as in its capacity as receiver for Washington Mutual Bank, asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase Bank, N.A. and the FDIC relating to JPMorgan Chase Bank, N.A.'s purchase of substantially all of the assets and certain liabilities of Washington Mutual Bank (the "Purchase & Assumption Agreement").

The Firm, Deutsche Bank National Trust Company and the FDIC signed a settlement agreement to resolve (i) pending litigation brought by Deutsche Bank National Trust Company against the FDIC and JPMorgan Chase Bank, N.A., as defendants, relating to alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements and (ii) JPMorgan Chase Bank, N.A.'s outstanding indemnification claims pursuant to the terms of the Purchase & Assumption Agreement. Deutsche Bank National Trust Company filed a judicial approval proceeding, and the court has approved the settlement.

Wendel. Since 2012, the French criminal authorities have been investigating a series of transactions entered into by senior managers of Wendel Investissement ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in Wendel. JPMorgan Chase Bank, N.A., Paris branch provided financing for the transactions to a number of managers of Wendel in 2007. JPMorgan Chase has cooperated with the investigation. The investigating judges issued an ordonnance de renvoi in November 2016, referring JPMorgan Chase Bank, N.A. to the French tribunal correctionnel for alleged complicity in tax fraud. No date for trial has been set by the court. The Firm has been successful in legal challenges made to the Court of Cassation, France's highest court, which have been referred back to and remain pending before the Paris Court of Appeal. In addition, civil proceedings have been commenced against JPMorgan Chase Bank, N.A. by a number of the managers. The claims are separate, involve different allegations and are at various stages of proceedings. * * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. The Firm's legal expense was $61 million and a benefit of $(430) million for the three months ended June 30, 2017 and 2016, respectively, and an expense of $279 million and a benefit of $(476) million for the six months ended June 30, 2017 and 2016, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or consequences related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

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Note 22 - Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments - Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a further discussion concerning JPMorgan Chase's business segments, see Segment results below, and Note 33 ofJPMorgan Chase's 2016 Annual Report.

Segment results

The following table provides a summary of the Firm's segment results as of or for the three and six months ended June 30, 2017 and 2016, on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This allows management to assess the comparability of revenue from year-to-year arising from both taxable and

tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fully Phased-ln RWA. Effective January l, 2017, the Firm's methodology used to allocate capital to the business segments was updated. Under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business. In addition, the new methodology incorporates Basel III Standardized Fully Phased-ln RWA (as well as Basel III Advanced Fully Phased-ln RWA), leverage, the global systemically important banks ("GSIB") surcharge, and a simulation of capital in a severe stress environment. The methodology will continue to be weighted towards Basel III Advanced Fully Phased-ln RWA because the Firm believes it to be the best proxy for economic risk.

Segment results and reconciliation'3'

As of or for the three months.;

$

3,684 7,728

,'■.=; Consumers, [endedJune 30;; ■,; ^^il00"™""*63"1""1 gin-' millions';. except ,i^t'Sfc^l^'^'-.?917:i.'·

11,412 1,394 6,500

Noninterest revenue Net interest income

Total net revenue

Provision for credit losses Noninterest expense

■ Gdf pqrateiS * . investm'erit:'Bank,,

6,444 2,445

583 1.505

586 1.231

-JZOM ^fAr: r: ,^lj?l^y^ Z017. y w.. x-2016^.; ^^;;.2017

$

9,165 235 5,078

2,088 (130) 790

1,817 (25) 731

6,475 $ 2,690

8,889 (53) 4,841

;;.2'o'i'6'^!

2,192 747

2,939 (8) 2.098

Income before income tax expense

Income tax expense

Net income

Average equity Total assets Return on equity Overhead ratio

3,518 1,295

2,223 $ 2,656

51,000 $ 51,000 $ 70,000

529,859 519,187 847,377

17% 20% 15%

57 52 54

2,493

902

696
521

1,016 392

624 $

64,000	$	20,000	$	16,000		$	9,000	$	9,000
826,019		220,676		208,151		147,508134,380			
15%		17%	16%	27%		22%			
55		38	40	68		71			

f^-,^^'^-^^^^^ Zf'gZ'tt';;11 :;'":^Pora^ ^^^Reconcil^

■rjn'millions; except ratjosKv^^	. ·. ?.⁰¹i. .	.. ?PA^Z. .	.L.^P^^.I^r Z017',.: '-·.v. .	'-20^/1		
Noninterest revenue	$ 781 $	171 $	(596) $	(529) $	13,262	$ 13,033
Net interest income	23	(329)	(339) $	(305)	12,208	11,347
Total net revenue	804	(158)	(935)$	(834)	25,470	24.380
Provision for credit losses	-	(1)	-	-	1,215	1,402
Noninterest expense	183	(273)	-	-	14,506	13,638
Income/(loss) before income tax expense/tbenefit)	621	116	(935)	(834)	9,749	9,340
Income tax expense/(benefit)	51	282	(935)	■ (834)	2,720	3,140
Net income/doss)	$ 570 $	(166) $	:1 $	- $	7,029	$ 6.200
Average equity	$ 80,200 $	84,429 $	- $	- $	230,200	$ 224,429
Total assets	817,754	778,359	NA	NA	2,563,174	2,466,096
Return on equity	NM	NM	NM	NM	12%	10%
Overhead ratio	NM	NM	NM	NM	57	56

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/fbenefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

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Segment results and reconciliation' 3'

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ended June 30. ■" v ■■ ■ ■ - :...'*.-,- j.;,<.i.A..,.,.. •..^^■ -^^■ .■-.-.■ ■ "•■ ■; ■■- -- -

i(jnmillipns;:exceb1f^								
Noninterest revenue	$ 7,001	$ 7.944	$ 13,380	$ 12.009	$ 1,182	$ 1,142	$ 4,634	$ 4,437
Net interest income	15,381	14,624	5,045	5,291	2,924	2,478	1,665	1,474
Total net revenue	22,382	22,568	18,425	17,300	4,106	3,620	6,299	5,911
Provision for credit losses	2,824	2,251	(149)	694	(167)	279	22	5
Noninterest expense	12,895	12,092	9,962	9,886	1,615	1,444	4,772	4,173
Income before income tax								
expense	6,663	8.225	8,612	6,720	2,658	1,897	1,505	1,733
Income tax expense	2,452	3,079	2,661	2,248	957	705	496	625
Net income	$ 4,211	$ 5.146	$ 5,951	$ 4.472	$ 1,701	$ 1.192	$ 1,009	$ 1,108
Average common equity	$ 51,000	$ 51.000	$ 70,000	$ 64,000	$ 20,000	$ 16.000	$ 9,000	$ 9,000
Total assets	529,859	519,187	847,377	826,019	220,676	208,151	147,508	134,380
Return on common equity	16%	19%	16%	13%	16%	14%	22%	24%
Overhead ratio	58	54	54	57	39	40	76	71

f As of-or for thesix months ended'June '30,

«'<"."~ :' .--v.' : Corporate ',' **' Reconciling Items 1"' "■.'.">** **,.',' '"• "Total. " •. j**

#wmillions^e^						
Noninterest revenue	$ 854 $	440 $	(1,178)$	(1,080)	$ 25,873	$ 24,892
Net interest income	(75)	(542)	(668)	(598)	24,272	22.727
Total net revenue	779	(102)	(1,846)	(1,678)	50,145	47.619
Provision for credit losses	-	(3)	-	-	2,530	3,226
Noninterest expense	281	(120)	-	-	29,525	27.475
Income/(loss) before income tax expense/(benefit)	498	21	(1,846)	(1,678)	18,090	16,918
Income tax expense/tbenefit)	(107)	219	(1,846)	(1,678)	4,613	5,198
Net income/doss)	$ 605 $	(198) $	-$	-	$ 13,477	$ 11,720
Average common equity	$ 78,959 $	82,995 $	- $	-	$ 228,959	$ 222,995
Total assets	817,754	778,359	NA	NA	2,563,174	2,466,096

Return on common equity	NM	NM	NM	NM	11%	10%
Overhead ratio	NM	NM	NM	NM '	59	58

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These FTE adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

Note 23 - Business changes and developments

Student loan portfolio transfer and sale

The Firm transferred the student loan portfolio to held-for-sale in the first quarter of 2017. The transfer resulted in a write-down of the portfolio to the estimated fair value at the time of the transfer. This write-down was recognized predominantly as a $467 million charge-off, resulting in a $218 million increase in the provision for credit losses after utilization of the allowance for loan losses of $249 million in the first quarter of 2017. The Firm sold substantially all of the portfolio in the second quarter of 2017, and such sale did not have a material impact on the Firm's Consolidated Financial Statements.

pwc

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders ofJPMorgan Chase & Co.:

We have reviewed the accompanying consolidated balance sheet ofJPMorgan Chase & Co. and its subsidiaries (the "Firm") as of June 30, 2017, and the related consolidated statements of income and comprehensive income for the three-month and six-month periods ended June 30, 2017 and 2016 and changes in stockholders' equity, and cash flows for the six-month periods ended June 30, 2017 and 2016. These interim financial statements are'the responsibility of the Firm's management.

We conducted our review in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modifications that should be made to the accompanying consolidated interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.
We previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet as of December 31, 2016, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for the year then ended (not presented herein), and in our report dated February 28, 2017, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet information as of December 31, 2016, is fairly stated in all material respects in relation to the consolidated balance sheet from which it has been derived.

PricewaterhouseCoopers LLP, 300 Madison Avenue, New York, NY 10017

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JPMorgan Chase & Co. Consolidated average balance sheets, interest and rates (Taxable-equivalent interest and rates; in millions, except rates)

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Assets

Deposits with banks

Federal funds sold and securities purchased under resale agreements

Securities borrowed

Trading assets - debt instruments

Taxable securities Nontaxable securities'"

Total securities Loans

Other assets""

Total interest-earning assets

Allowance for loan losses Cash and due from banks Trading assets - equity instruments Trading assets - derivative receivables Goodwill

Mortgage servicing rights Other intangible assets Other assets

'Interest!?. ;

.: Rate .. (annualized)"

$ 437,637 $ 1,008 0.92%

193,302 528 1.10

1,410 720

2.47 6.35

90,151 (21) (0.09)

234,809 1,834 3.13

3.11 4.46 4.28

229,196 45,499

274,695 2,130 904,969 10,066 41,546 444

15,989

2.95

2,177,109 (13,350) 19,742 126,127 58,250 47,290 5,774 838 137,456

Average '.* ..balance' v

0.49%

.„••, " '>>^Rate'.> li Interest^ £ ^"Jannu'aljzedjj

$ 379.001 $ 466

201,871 576 1.15

101.669 (96) <" (0.38)

1,380 671

2.36 6.08

215.780 1.878 3.50

2.95 4.22 2.06

235,641 44,400

280,041 2.051 859.727 9,032 41,436 211

14,118

2.73

2,079,525 (13.983) 18,956 99,626 69.823 47.309 5.512 928 133,493

$ 2,559,236

Liabilities

196,331 19,466

197,066 34,083

295,868

interest-bearing deposits

Federal funds purchased and securities loaned or sold under repurchase agreements

Commercial paper

Trading liabilities - debt, short-term and other liabilities"""" Beneficial interests issued by consolidated VIEs Long-term debt

Total interest-bearing liabilities	1,748,822
Noninterest-bearing deposits	404,121
Trading liabilities - equity instruments""	19,346
Trading liabilities - derivative payables	44,740
All other liabilities, including the allowance for lending-related commitments	85,939

0.25 %

0.79 1.29 1.12 1.51 2.29

0.79

282 38 314 118 1,393

$ 919,759 $ 321

176.855 17.462

200.141 38,411

291.726

2,466

1,644.354 396,207 20.747 54,048

75,336

0.14%

0.64 0.88 0.63 1.24 1.92

0.60

Total liabilities

Stockholders' equity

Preferred stock

Common stockholders' equity

2,302,968

26,068 230,200

2,190,692

26,068 224,429

Total stockholders' equity

Total liabilities and stockholders' equity

Interest rate spread

Net interest income and net yield on interest-earning assets

2.16 % 2.31

2.13% 2.25

a) Represents securities which are tax exempt for U.S. federal income tax purposes.
b) includes margin loans.
c) Includes brokerage customer payables.
d) Included trading liabilities - debt and equity instruments of $90,499 million and $95,151 million for the three months ended June 30. 2017 and 2016, respectively.
e) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
f) Negative interest income and yield is related to client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense and reported within trading liabilities - debt, short-term and other liabilities.
g) For the three months ended June 30, 2017 and 2016, the annualized rates for securities, based on amortized cost, were 3.15% and 3.00%, respectively; this does not give effect to changes in fair value that are reflected in accumulated other comprehensive income/doss).

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JPMorgan Chase & Co. Consolidated average balance sheets, interest and rates (Taxable-equivalent interest and rates; in millions, except rates)

Six months ended June-30,2017

Average. I; balance
Rate ;.(annualized)
Average : balance
Rate '.: (annualized):

Assets

Deposits with banks

Federal funds sold and securities purchased under resale agreements

Securities borrowed

Trading assets - debt instruments

Taxable securities Nontaxable securities™

Total securities Loans

Other assets""

Total interest-earning assets

Allowance for loan losses Cash and due from banks Trading assets - equity instruments Trading assets - derivative receivables Goodwill

Mortgage servicing rights Other intangible assets Other assets

Total assets

$ 429,946 $ 1,730 195,122 1,054

2,840 1,410

92,747 230,330

234,967 45,133

280,100 4,250 898,473 19,888 42,337 786

0.81 %

1.09 (0.14) 3.25

2.44 6.30

3.06 4.46 3.74

0.50'

$ 371,600 $ 926

2.822 1,336

2.38 6.07

203,433 1,130 1.12 102,565 (188) (0.37) 212,047 3.594 3.41

2.96 4.24 2.05

238,008 44,257

2.73

$2,418,055

282,265 4,158 850,126 17,939 39,718 404

Liabilities

192,990 16,432

198,515 36,416

294,056

Interest-bearing deposits

Federal funds purchased and securities loaned or sold under repurchase agreements

Commercial paper

Trading liabilities - debt, short-term and other liabilities1'"1"

Beneficial interests issued by consolidated VIEs

Long-term debt

Total interest-bearing liabilities	**1,734,476**
Noninterest-bearing deposits	**404,831**
Trading liabilities - equity instruments""	**20,204**
Trading liabilities - derivative payables	**46,547**
All other liabilities, including the allowance for lending-related **commitments**	**85,186**

0.23 %

0.71 1.26 1.00 1.46 2.25

0.75

542 71 541 231 2.612

$ 904,050 $ 641

174.050 17,499

198,187 39.125

289.943

4,638

1,622.854 395,568 19,625 57.319

73,626

0.14'

0.63 0.82 0.55 1.19 1.81
0.57

Total liabilities

Stockholders' equity

Preferred stock

Common stockholders' equity

2,291,244

26,068 228,959

2.168,992

26,068 222,995

Total stockholders' equity

Total liabilities and stockholders' equity

Interest rate spread

Net interest income and net yield on interest-earning assets

2.17 % 2.32

2.16 c 2.28

a) Represents securities which are tax exempt for U.S. federal income tax purposes.
b) Includes margin loans.
c) Includes brokerage customer payables.
d) Included trading liabilities - debt and equity instruments of $92,283 million and $91,434 million for the six months ended June 30, 2017 and 2016, respectively.
e) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
f) Negative interest income and yield is related to client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense and reported within trading liabilities - debt, short-term and other liabilities.
g) For the six months ended June 30, 2017 and 2016, the annualized rates for securities, based on amortized cost, were 3.09% and 3.01% respectively; this does not give effect to changes in fair value that are reflected in accumulated other comprehensive income/doss).

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GLOSSARY OF TERMS AND ACRONYMS

2016 Annual Report or 2016 Form 10-K: Annual report on Form 10-K for year ended December 31, 2016, filed with the U.S. Securities and Exchange Commission.

ABS: Asset-backed securities

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

AFS: Available-for-sale

Allowance for loan losses to total loans: represents period-end allowance for loan losses divided by retained loans.

AOCI: Accumulated other comprehensive income/(loss)

ARM(s): Adjustable rate mortgage(s)

AWM: Asset & Wealth Management

Beneficial interests issued by consolidated VIEs:
represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

BHC: Bank holding company

CB: Commercial Banking

CBB: Consumer & Business Banking

CCAR: Comprehensive Capital Analysis and Review

CCB: Consumer & Community Banking

CCP: "Central counterparty" is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

CDS: Credit default swaps

CEO: Chief Executive Officer
CETI Capital: Common Equity Tier 1 Capital
CFTC: Commodity Futures Trading Commission

CFO: Chief Financial Officer

Chase Bank USA, N.A.: Chase Bank USA, National Association

CIB: Corporate & Investment Bank CIO: Chief Investment Office

Client deposits and other third party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.

CLO: Collateralized loan obligations
CLTV: Combined loan-to-value

Collateral-dependent: A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Core loans: represents loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caal and below, as defined by S&P and Moody's.

CRO: Chief Risk Officer
CVA: Credit valuation adjustments

DFAST: Dodd-Frank Act Stress Test

Dodd-Frank Act: Wall Street Reform and Consumer Protection Act

DOJ: U.S. Department of Justice DOL: U.S. Department of Labor DVA: Debit valuation adjustment E&P:

Exploration & Production EC: European Commission

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of

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the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

ERISA: Employee Retirement Income Security Act of 1974

EPS: Earnings per share

Exchange-traded derivatives: Derivative contracts that are executed on an exchange and settled via a central clearing house.

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FCC: Firmwide Control Committee

FDIA: Federal Depository Insurance Act

FDIC: Federal Deposit Insurance Corporation

Federal Reserve: The Board of the Governors of the Federal Reserve System

Fee share: Proportion of fee revenue based on estimates of investment banking fees generated across the industry from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FFELP: Federal Family Education Loan Program

FFIEC: Federal Financial Institutions Examination Council

FHA: Federal Housing Administration

FHLB: Federal Home Loan Bank

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Firm: JPMorgan Chase & Co.

Forward points: represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Free-standing derivatives: is a derivative contract entered into either separate and apart from any of the Firms other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FSB: Financial Stability Board

FTE: Fully taxable-equivalent

FVA: Funding valuation adjustment FX: Foreign exchange

G7: "Group of Seven nations": Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association

GSE: Fannie Mae and Freddie Mac

GSIB: Globally systemically important banks

HAMP: Home affordable modification program

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

HELOAN: Home equity loan

HELOC: Home equity line of credit

Home equity - senior lien: represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity - junior lien: represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

HQLA: High quality liquid assets

HTM: Held-to-maturity

IDI: Insured depository institutions

IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

IR: Interest rate

ISDA: International Swaps and Derivatives Association

JPMorgan Chase: JPMorgan Chase & Co.

JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Securities: J.P. Morgan Securities LLC LCR: Liquidity coverage ratio

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LGD: Loss given default LIBOR: London Interbank Offered Rate LLC: Limited Liability Company LOB: Line of

business

Loss emergence period: represents the time period between the date at which the loss is estimated to have been incurred and the realization of that loss.

LTIP: Long-term incentive plan

LTV: "Loan-to-value ratio": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Master netting agreement: An agreement between two counterparties who have multiple contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

MMDA: Money Market Deposit Accounts

Moody's: Moody's Investor Services

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial

proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio-, (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSA: Metropolitan statistical areas

MSR: Mortgage servicing rights

NA: Data is not applicable or available for the period presented.

Net Capital Rule: Rule 15c3-l under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: represents net charge-offs/ (recoveries) (annualized) divided by average retained loans for the reporting period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful

NOL: Net operating loss

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit

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card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfactions, predominantly real estate owned and other commercial and personal property.

NOW: Negotiable Order of Withdrawal

NSFR: Net stable funding ratio

OAS: Option-adjusted spread

OCC: Office of the Comptroller of the Currency

OCI: Other comprehensive income/(loss)

OEP: One Equity Partners

OIS: Overnight index swap

OPEB: Other postretirement employee benefit

OTC: "Over-the-counter derivatives": Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

OTC cleared: "Over-the-counter cleared derivatives":
Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

OTTI: Other-than-temporary impairment

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase & Co.

Participating securities: represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

PCA: Prompt corrective action

PCI: "Purchased credit-impaired" loans represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the FASB. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

PD: Probability of default

PRA: Prudential Regulatory Authority

Pre-provision profit/(loss): represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Principal transactions revenue: Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities). Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives.

PSU(s): Performance share units

Receivables from customers: primarily represents margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).

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Revenue wallet: Total fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume based league tables for the above noted industry products.

RHS: Rural Housing Service of the U.S. Department of Agriculture

ROE: Return on equity

ROTCE: Return on tangible common equity

RSU(s): Restricted stock units

RWA: "Risk-weighted assets": Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel ill Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.

S&P: Standard and Poor's 500 Index

SAR(s): Stock appreciation rights

SCCL Single-counterparty credit limits

SEC: Securities and Exchange Commission

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SMBS: Stripped mortgage-backed securities

SOA: Society of Actuaries

SPEs: Special purpose entities

Structural interest rate risk: represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share

TCE: Tangible common equity

TDR: "Troubled debt restructuring" is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

TLAC: Total Loss Absorbing Capacity

U.K.: United Kingdom

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S.: United States of America

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. GSE(s): "U.S. government-sponsored enterprises": In the U.S., GSEs are quasi-governmental, privately-held entities established by Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae, which is directly owned by the U.S. Department of Housing and Urban Development. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VIEs: Variable interest entities

Warehouse loans: consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of

Washington Mutual Bank ("Washington Mutual") from the FDIC.

LINE OF BUSINESS METRICS

CONSUMER & COMMUNITY BANKING ("CCB")

Households: A household is a collection of individuals or entities aggregated together by name, address, tax identifier and phone. Reported on a one-month lag.

Debit and credit card sales volume: Dollar amount of cardmember purchases, net of returns.

Deposit margin/deposit spread: represents net interest income expressed as a percentage of average deposits.

Mortgage Production and Mortgage Servicing revenue comprises the following:

Net production revenue: includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue: includes the following components:

a) Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

b) Risk management represents the components of Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

Mortgage origination channels comprise the following:

Retail: Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent: Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Card Services: includes the Card and Commerce Solutions businesses.

Card: is a business that primarily issues credit cards to consumers and small businesses.

Commerce Solutions: is a business that primarily processes transactions for merchants.

Net revenue rate: represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

CORPORATE & INVESTMENT BANK ("CIB")

Definition of selected CIB revenue:

Investment Banking: incorporates all revenue associated with investment banking activities, and is reported net of investment banking revenue shared with other lines of business.

Treasury Services: offers a broad range of products and services that enable clients to manage payments and receipts, as well as invest and manage funds. Products include U.S. dollar and multi-currency clearing, ACH, lockbox, disbursement and reconciliation services, check deposits, and currency-related services.

Lending: includes net interest income, fees, gains or losses on loan sale activity, gains or losses on securities received as part of a loan restructuring, and the risk management results related to the credit portfolio. Lending also includes Trade Finance, which includes loans tied directly to goods crossing borders, export/import loans, commercial letters of credit, standby letters of credit, and supply chain finance.

Fixed Income Markets: primarily includes revenue related to market-making across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.

Equity Markets: primarily includes revenue related to market-making across global equity products, including cash instruments, derivatives, convertibles and Prime Services.

Securities Services: primarily includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds. Also includes clearance, collateral management and depositary receipts business which provides broker-dealer clearing and custody services, including tri-party repo transactions,

collateral management products, and depositary bank services for American and global depositary receipt programs.
Description of certain business metrics:

Assets under custody ("AUC"): represents activities associated with the safekeeping and servicing of assets on which Securities Services earns fees.

Investment banking fees: represents advisory, equity underwriting, bond underwriting and loan syndication fees.

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COMMERCIAL BANKING ("CB")

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking: covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking: covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending: primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking: provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other: primarily includes lending and investment-related activities within the Community Development Banking business.

CB product revenue comprises the following: '

Lending: includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Treasury services: includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking: includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from fixed income and equity market products used by CB clients is also included.

Other: product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activity and certain income derived from principal transactions.
ASSET & WEALTH MANAGEMENT ("AWM") Assets under management ("AUM"): represent assets managed by AWM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called."

Client assets: represent assets under management, as well as custody, brokerage, administration and deposit accounts.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

Alternative assets: The following types of assets constitute alternative investments - hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

AWM's lines of business consist of the following:

Asset Management: provides comprehensive global investment services - including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Wealth Management: offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AWM's client segments consist of the following:

Private Banking: clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional: clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail: clients include financial intermediaries and individual investors.

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Asset Management has two high-level measures of its overall fund performance:

Percentage of mutual fund assets under management in funds rated 4- or 5-star: Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds.

A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The "overall Morningstar rating" is derived from a weighted average of the performance associated with a fund's three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S. domiciled funds, separate star ratings are given at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and "hence excluded from this analysis. All ratings, the assigned peer categories and the asset values used to derive this analysis are sourced from these fund rating providers. The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on star ratings at the share class level for U.S. domiciled funds, and at a "primary share class" level to represent the star rating of all other funds except for Japan where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). The performance data could have been different if all funds/ accounts would have been included. Past performance is not indicative of future results.
Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three, and five years): All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from the fund ranking providers. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/ accounts would have been included. Past performance is not indicative of future results.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

For a discussion of the quantitative and qualitative disclosures about market risk, see the Market Risk Management section of Management's discussion and analysis on pages 72-76 of this Form 10-Q and pages 116-123 ofJPMorgan Chase's 2016 Annual Report.

Item 4. Controls and Procedures. ^

As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. See Exhibits 31.1 and 31.2 for the Certification statements issued by the Chairman and Chief Executive Officer and Chief Financial Officer.

The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, in a firm as large and complex as JPMorgan Chase, lapses or deficiencies in internal controls do occur from time to time, and there can be no assurance that any such deficiencies will not result in significant deficiencies or material weaknesses in internal controls in the future. For further information, see "Management's report on internal control over financial reporting" on page 139 of JPMorgan Chase's 2016 Annual Report. There was no change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) that occurred during the three months ended June 30, 2017, that has materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

Part II - Other Information

Item l. Legal Proceedings.

For information that updates the disclosures set forth under Part l, item 3: Legal Proceedings, in JPMorgan Chase's 2016 Annual Report on Form 10-K, see the discussion of the Firm's material legal proceedings in Note 21 of this Form 10-Q.

Item 1A. Risk Factors.

For a discussion of certain risk factors affecting the Firm, see Part I, Item 1A: Risk Factors on pages 8-21 ofJPMorgan Chase's 2016 Annual Report on Form 10-K and Forward-Looking Statements on page 82 of this Form 10-Q.

Supervision and regulation

For information on Supervision and Regulation, see the Supervision and regulation section on pages 1-8 of JPMorgan Chase's 2016 Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

During the three months ended June 30, 2017, no shares of common stock of JPMorgan Chase & Co. were issued in transactions exempt from registration under the Securities Act of 1933, pursuant to Section 4(2) thereof.

Repurchases under the common equity repurchase program

Following receipt in June 2017 of the Federal Reserve's non-objection to the Firm's 2017 capital plan, the Firm's Board of Directors authorized the repurchase of up to $19.4 billion of common equity (common stock and warrants) between July 1, 2017 and June 30, 2018. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the three and six months ended June 30, 2017 and 2016. There were no warrants repurchased during the six months ended June 30, 2017 and 2016.

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Total shares of common stock repurchased	35.0	45.8	67.1	75.0
Aggregate common stock repurchases	$ 3,007	$ 2,840	$ 5,839	$ 4,536

The Firm may, from time to time, enter into written trading plans under Rule 10b5-l of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-l repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity - for example, during internal trading blackout periods. All purchases under a Rule 10b5-l plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

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The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5 -l programs; and may be suspended at any time.

Shares repurchased pursuant to the common equity repurchase program during the six months ended June 30, 2017, were as follows.

Totaf'sliares of' common stock 'repurchased: '■■:
Average price paid.
per share of common stock[1]"
Aggregate repurchases
of.com'mon equity ;... (ih™ilions)!.[J]) ,
. Dollar value of remaining,:] ' authorizedTepurchase' \ \ K(in miliions)"[1] \ . .1

First quarter
April May June
32,132,964
12.141,723 12.032,546 10,765,858
88.14
86.43 86.38 85.26
2.832
1,049 1,040 918
3,221 ■'
2.172 1,132 214
Second quarter
Year-to-date

a) Excludes commissions cost.
b) Represents the amount remaining under the $10.6 billion repurchase program that was authorized by the Board of Directors on June 29, 2016.
c) The $214 million unused portion under the prior Board authorization was canceled when the $19.4 billion program was authorized.

Item 3. Defaults Upon Senior Securities. None.

Item 4. Mine Safety Disclosures. Not applicable.

Item 5. Other Information. None.

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Item 6. Exhibits.

Exhibit No.	Description of Exhibit
15	Letter re: Unaudited Interim Financial Information.'3'
1	Certification.'3'
2	■ Certification.""
32	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.""
101.INS	XBRL instance Document.'3""
101.SCH	XBRL Taxonomy Extension Schema Document.la)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.'3'
101.DEF	' XBRL Taxonomy Extension Definition Linkbase Document.'3'
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.131
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.'3'

a) Filed herewith.

b) Furnished herewith. This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

c) Pursuant to Rule 405 of Regulation S-T. includes the following financial information included in the Firm's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2017, formatted in XBRL (extensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income (unaudited) for the three and six months ended June 30, 2017 and 2016, (ii) the Consolidated statements of comprehensive income (unaudited) for the three and six months ended June 30, 2017 and 2016, (iii) the Consolidated balance sheets (unaudited) asof June 30, 2017, and December 31. 2016, (iv) the Consolidated statements of changes in stockholders' equity (unaudited) for the six months ended June 30, 2017 and 2016, (v) the Consolidated statements of cash flows (unaudited) for the six months ended June 30, 2017 and 2016. and (vi) the Notes to Consolidated Financial Statements (unaudited).

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

JPMorgan Ghase & Co.
(Registrant)

By: Is/ Nicole Giles
Nicole Giles Managing Director and Corporate Controller
(Principal Accounting Officer)

Date: August 2, 2017

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INDEX TO EXHIBITS

Exhibit No.	Description of Exhibit
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1	Certification.
2	Certification.
32	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.f
101.INS	XBRL Instance Document.
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101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

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pwc

August 2, 2017

Securities and Exchange Commission 100 F
Street, N.E. Washington, DC 20549

Re: JPMorgan Chase & Co.
Registration Statements on Form S-3 (NO. 333-209681) (NO. 333-209682) (No. 333-209682-01)

Registration Statements on Form S-8
(NO. 333-185584)
(No. 333-185582)
(No. 333-185581)
(NO. 333-175681)
(No. 333-158325)
(NO.333-150208)
(NO. 333-145108)
(No. 333-142109)
(No. 333-125827)
(NO. 333-112967)
(No. 333-64476)

Commissioners:

We are aware that our report dated August 2, 2017 on our review of the consolidated balance sheet of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of June 30, 2017 and the related consolidated statements of income and comprehensive income for each of the three- and six-month periods ended June 30, 2017 and 2016 and changes in stockholders' equity and cash flows for the six-month periods ended June 30, 2017 and 2016, included in the Firm's quarterly report on Form 10-Q for the quarter ended June 30, 2017 is incorporated by reference in its Registration Statements referred to above. Pursuant to Rule 436(c) under the Securities Act of 1933, such report should not be considered a part of such Registration Statements, and is not a report within the meaning of Sections 7 and 11 of that Act.

PricewaterhouseCoopers LLP, 300 Madison Avenue, New York, NY 10017

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Very truly yours,

Exhibit 31.1

JPMorgan Chase & Co.

CERTIFICATION

I, James Dimon, certify that:

1. I have reviewed this quarterly report on Form 10-Q of JPMorgan Chase & Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the

equivalent function):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 2, 2017

Isl James Dimon James Dimon
Chairman and Chief Executive Officer

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Exhibit 31.2

JPMorgan Chase & Co.

CERTIFICATION

I, Marianne Lake, certify that:

1. I have reviewed this quarterly report on Form 10-Q of JPMorgan Chase & Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 2, 2017

Isl Marianne Lake Marianne Lake
Executive vice President and Chief Financial Officer

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Exhibit 32
JPMorgan Chase & Co.

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of JPrVlorgan Chase & Co. on Form 10-Q for the period ended June 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of JPMorgan Chase & Co., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations ofJPMorgan Chase & Co.

Date: August 2, 2017 By: /s/ James Dimon

James Dimon

Chairman and Chief Executive Officer

Date: August 2, 2017 By: /s/ Marianne Lake

Marianne Lake
Executive vice President and Chief Financial Officer

This certification accompanies this Form 10-Q and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section.

A signed original of this written statement required by Section 906 has been provided to, and will be retained by, JPMorgan Chase & Co. and furnished to the Securities and Exchange Commission or its staff upon request.

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM 10-K

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2016	Commission file number 1-5805

JPMorgan Chase & Co.

(Exact name of registrant as specified in its charter)

Delaware	
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)
270 Park Avenue, New York, New York 10017	
(Address of principal executive offices)	(Zip code)

Registrant's telephone number, including area code: (212) 270-6000
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock	The New York Stock Exchange The London stock Exchange
Warrants to purchase shares of Common Stock	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 5.50% Non-Cumulative Preferred Stock, Series O	The New York Stock Exchange

Depositary Shares, each representing a one-four hundredth interest in a share of 5.45% Non-Cumulative Preferred Stock, Series P	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.70% Non-Cumulative Preferred Stock, Series T	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.30% Non-Cumulative Preferred Stock, Series w	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.125% Non-Cumulative Preferred Stock, Series Y	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.10% Non-Cumulative Preferred Stock, Series AA	The New York Stock Exchange
Depositary shares, each representing a one-four hundredth interest in a share of 6.15% Non-Cumulative Preferred Stock, Series BB	The New York Stock Exchange
Alerian MLP Index ETNs due May 24,2024	NYSE Area. Inc.
Guarantee of Callable Step-Up Fixed Rate Notes due April 26,2028 of JPMorgan Chase Financial Company LLC	The New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None Indicate by check mark if the

registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. □ Yes E] no Indicate by check mark if the registrant is not required to

file reports pursuant to Section 13 or Section 15(d) of the Act □ Yes E No

Indicate by check mark whether the registrant (1) has filed all reports required to be Hied by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 1Z months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. El yes □ No Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). E) Yes □ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. fx] Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act

El Large accelerated filer	□ Accelerated filer	□ Non-accelerated filer (Do not check if a smaller reporting company)	□ Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). □ Yes El No The aggregate market value of

JPMorgan Chase & Co. common stock held by non-affiliates as of June 30,2016: $223,144,102,133

Number of shares of common stock outstanding as of January 31, 2017:3,571,963,160

Documents incorporated by reference: Portions of the registrant's Proxy Statement for the annual meeting of stockholders to be held on May 16, 2017, are incorporated by reference in this Form 10-K in response to Items 10,11,12,13 and 14 of Part III.

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Form 10-K Index

Hem 1 Business

Overview

I^r^M;)ii-;«Ki Oiase & Co f i I'M organ Oiase" or Hie "Firm") a financial noWing ictmuanv incorporated under Delaware law in I^n^o8 i; a leadng idl financial services firm and one v\ the Uvgesi .'lankni; instituiions m ilio United Stales of America ru.S "]. wiiii opeiiitiuns wo'ldwirte. I he Firm had i? E. iniliun n asset[1], and I2bl I Ijil'ikmi in stockholders' equity of December j 1. ?01 ti Tt .e Firm is a If rider in investment banking, (iiuulu! services for consumers and small Giismt'sses cummema! hanking financial transaction puif rising and asset management llntltT the J P Morgan and Chase branrjs. the Finn serves millions ol customer ui [tie u b and many of Hie world's mew pioinment corpoiate. in:iiiutiynal ontl government clients

iPMoigan Chase's principal bank subsidiaries are JPMorgan Chase Dank. National Assw ulion ("JPMorgan Chase Rank. N A "l. a naii'juai hanking association with u S branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA. N A "), a national banking association that is the Fii m's cred't card-issuing bank JPMorgan Chase's principal nonbank subsidiary k j p Morgan Securities LLC ("JPMtnf;an Securities*), the Firm's U S mvesimenl banking firm The bank and nonbank subsidiaiies ot JPMorgan Chase operate nationally as well .is through overseas branches and subsidiaries, lepresentanve ofbres and subsidiary foreign hanks One of the Firm's principal operating subsidiaries in the UK is J P. Morgan Securities pic, a subsnlia: v ut JPMorgan Chase Dank, H A ihe Finn's website is www.jpmorganchasecom <http://www.jpmorganchasecom> JPMorgan Cruse makes available dee of charge, through its website, annual reporison Torm 10 K. quarterly reports on For m 10-Q and current reports on Form 8-K pursuant to Section 13(a) or Ser.hon 1 b(d) of the Securities Exchange Act of 1934, as soon as leasoiuhly practicable alter it electronically files such material with, or furnishes such material to, the u.S Securities and Exchange Commission (the "SEC") The Firm has adopted, and posted on its website, a Code of Conduct for all employees of the Firm and a Code of Ellucs lor its Chairman and Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer and all oilier professionals o! the Firm worldwide serving in a finance, accounting, tax or investor relations role.

Business segments

JPMorgan Chase's activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate segment The rirm's consumer business is the Consumer & Community Banking ("CCB") segment The rum's wholesale business segments are Corporate & investment Bank ("CIB"). Commercial Banking ("CB"), and Asset & Wealth Management ("AWM") (formerly Asset Management or "AM") a description of ihe Firm's business segments and the products and services I hey provide to their respective client bases is provided in the "Business segment results" section

□I Management s discussion and analysis of financial condition and results of operations ("UD&a") beginning on pagi; 36 and in Noi? 13

Competition

JPMorgan Chase and its subsidiaries and affiliates operate in a highly competitive environment Competitors include other banks, brokerage firms, investment banking companies, meir.hant tianks. hedge lunds. commodity sradmg companies, private equity firms, insurance companies, mutual lund companies, investment managers, credit card companies. ;;iuripaflc banking companies, trust companies, securities processing companies, automobile financing companies, leasing companies, e-commerce and other Internel-based companies, financial technology companies, and other companies engaged in providing similar products and services The Firm's businesses generally compete on the basis of the quality and variety of (he Firm's products and services, transaction execution, innovation, reputation and price Competition also vanps based on the types of clients, customers, industries and geographies served With respect to some of its geographies and products, JPMorgan Chase competes globally, wilh respect to others, the Firm competes on a national or regional basis The Firm's ability lo compete also depends on its ability to attract and retain professional and other personnel, and on its reputation

it is likely thai competition in the financial services industry will become even more intense as ihe Firm's businesses continue (o compete with other financial institutions that may haw; a stionger local presence m certain geocraphies oi that operate under different rules and regulatory regimes than the Firm, or with companies that provide new or innovative products or services [hat the Firm does not provide

Supervision and regulation

The Firm is subject to regulation under state and federal laws in the U.S., as well as the applicable laws of each of the various jurisdictions outside the u S in which the Firm does business

As a result of regulatory reforms enacted and proposed in ihe U.S. and abroad, the Firm has been experiencing a period of significant change in regulation which has had and could continue (o have significant consequences (or how the Firm conducts business. The Firm continues to work diligently in assessing the regulatory changes it is tacing, and is devoting substantial resources to comply with all the new regulations, while, at the same time, endeavoring to best meet the needs and expectations of Us customers, clients and shareholders. These efforts include the implementation ot new policies, procedures and controls, and appropriate adjustments to the Firm's business and operations, legal entity structure, and capital and liquidity management. The combined effect of numerous rulemakings by multiple governmental agencies and regulators, and (he potential confers or inconsistencies among such

Parti

rulr>s. present challenges and risks to the Firm's business and operations Given the current status ol the regulatory developments, the Firm cannot currently quantify all of the possible el teas on its business and operations of the significant changes that are underway. For more information, see Risk Factors on pages 8-21. Financial holding company:

Consolidated supervision by the Board of Governors of the Feacral Reserve System (the 'Federal Reserve') As a bank holding company (~BHC) and a financial holding company, JPMorgan Chase is subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve The Federal Reserve acts as an "umbrella regulator" and certain of JPMorgan Chase's subsidiaries are regulated directly by additional authorities based on the particular activities of those subsidiaries For example. JPMorgan Chase's national bank subsidiaries, including JPMorgan Chase Bank. N.A , and Chase Bank USA, N A., arc subject to supervision and regulation by the Office of the Comptroller of the Currency COCO and, with respect to certain matters, by the Federal Reserve and the Federal Deposit Insurance Corporation (the "i-DIC'). Certain non-bank subsidiaries, such as the Firm's U.S. broker-dealers, are subiect to supervision and regulation by the SEC. and subsidiaries of the Firm that engage in certain futures-reliiied and swaps-related activities arc subject to supervision and regulation by the Commodity futures Trading Commission ("CFTC) J P. Morgan Securities pic, is a U k bank licensed within the European Economic Area (the "EEA") to undertake all banking activity and is regulated by the U.K. Prudential Regulation Authority (the "PRA"). a subsidiary of the Bank of England which has responsibility lor prudential regulation ol banks and other systemically important institutions, and by the Financial Conduct Authority ("FCA"). which regulates prudential matters for firms lhat are not so regulated by the PRA and conduct matters for all market participants The rirm's other non-u S subsidiaries are regulated by the banking any securities regulatory authorities in the countries in winch they operate See Securities and broker-dealer regulation. Investment management regulation and Derivatives regulation below in addition, the Firm's consumer activities are subject to supervision and regulation by Ihe Consumer Financial Protection Bureau ("CFPB") and lo regulation under various state statutes which are enforced by the respective state's Attorney General.

Scope of nermissih/e business activities. 1 he Bank Holding Company Ar t generally restricts BHCs from engaging in huMness activities other than (he business of banking and certain closely related activities Financial holding companies generally can engage m a broader ranee of financial activities than are otherwise permissible tor RHCs, including underwriting, dealing and making markets in securities, and making merchant banking investments in non-financial companies. The Federal Reserve has the authority (o limit a finant.Ml holding company's ability lo conduct otherwise permissible activities if the financial

holding company or any of its depositary institution subsidiaries ceases to meet the applicable eligibility requirements (including requirements that the financial holding company and each of Us U S depository institution subsidiaries maintain their status as "well-capitalized" and "well-managed') The Federal Reseive may also impose corrective capital and/or managerial requirements on the financial holding company and may. for examplti, require divestiture of the holding company's depository institutions if the deficiencies persist. Federal regulations also provide that it any depository institution controlled by a financial holding company lails to maintain a satisfactory rating under the Community Reinvestment Act. the Hederal Reserve must prohibit (he financial holding company and its subsidiaries from engaging in any activities other than those permissible for bank holding companies In addition, a financial holding company must obtain Federal Reserve approval before engaging in certain hanking and other financial activities both in the U.S and internationally, as further described under Regulation of acquisitions below Activities fE;tr/cf ions under the Volckei Rule Section h 19 of the wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") (the "volrker Rule") prohibits banking entities, including the Firm, from engaging in certain "proprietary trading" activities, subject to exceptions for underwriting, market-making. risk-mili[;aling hedging and certain other activities in addition, the Volckei Rule limits the sponsorship ot, and investment in. 'covered funds" (as defined by the vokker Rule) and imposes limns on certain transactions between the Firm and its sponsored funds (see JPMorgan Chase's subsidiary banks - Rest net ions on transaction^ with affiliates below) The vokker Rule requires banking entities to establish comprehensive compliance programs reasonably designed lo help ensure and monitor compliance with ihe restrictions under the Vnlcker Rule, including, m order to distinguish permissible from impermissible risk-taking aclivmes, the measurement, monitoring and reporting ol certain key metrics Capital and liquidity requirements. The Federal Reserve establishes capital and leverage requirements for the Firm and evaluates lis compliance with such requirements The OCC establishes similar capital and leverage requirements for the Firm's national banking subsidiaries For more information about the applicable requirements relating lo risk-based capital and leverage m the U.S. under the most recent capital framework established by the Basel Committee on Banking Supervision [the "Basel Committee") ("Basel III"), see Capital Hisk Management on pages 76-flS and Note 28 Under Basel III. bank holding companies and banks are required lo measure their liquidity against two specific liquidity tests' the liquidity coverage ratio ("LCH") and (he rwf stable funding ratio ("NSFR"). 7he u S banking regulators have approved the final LCR rule ("U S LCR"). which became ef lective on January l, 2015 In April 2016, the U S banking regulators issued a proposed rule for NSFR To: additional information on these ratios, see Liquidity Risk Management on pages 15 0-115 On December 1^, 2016 the Federal Reserve published final

U S. LCR public disclosure requirements Starting with the second quarter of 2017. the Firm will be required to disclose quarterly its consolidated LCR pursuant to the U.S LCR rule, including the Firm's average LCR for the quarter and the key quantitative components of the average LCR in a standardized template, along with a qualitative discussion of material drivers ol the ratio, changes over time, and causes of such changes On September 8, 201b the Federal Reserve published the framework that will apply to the setting of Hie countercyclical capital buffer. As ol October 24. 2016 the Federal Reserve reaffirmed setting the U.S. countercyclical capital buffer at 0%, and stated lhat it will review the amount at least annually Banking supervisors roiili'iue lo consider refinements and enhjncemenls lo the Basel III capital Iramework for financial institutions The Basel Committee finalized revisions to market risk capital for trading books and the Ircatment of interest rate risk in the banking book, other proposals being contemplated by the Basel Committee include revisions to. among others, standardized credit and operational risk capital Iramcworks. a recahbration of the leverage ratio, revisions to the securitization framework, and changes to the definition of defaulted assets in January 2017, the Basel Committee announced lhat the review ol the proposals to finalize the post-crisis regulatory reforms has been postponed After a pi oposal is finalized by the Basel Committee, U S banking regulators would then need to propose requirements applicable to U S financial institutions. In Match 2016, the Federal Reserve Board released a revised proposal to establish single-counterparty credit limits for larj-e U.S bank holding companies and " foreign banking organizations

Stress fesfs The Federal Reserve hds adopted supervisory stress tests for large bank holding companies, including JPMorgan Chase, which form part of the Federal Reserve's annual Comprehensive Capital Analysis and Review ("CCAR") framework Under the framework, the Firm must conduct semi-annual company-run sltess tests and. in addition, must submit an annual capital plan to the Federal Reserve, taking into account the results of separate stress lests designed by (he Firm and the Federal Reserve tn reviewing Ihe Firm's capital plan, the Federal Reserve considers both quantitative and qualitative factors. Qualitative assessments include, among other things, the comprehensiveness ot the plan, the assumptions and analysis underlying (he plan, and the extent to which the Firm has satisfied certain supervisory matters related to the l irm's processes and analyses, including the design and operational effectiveness of the controls governing such processes Moreover. Hie Firm is required to receive a notice of non-obieclion bom the Fedeial Reserve before taking capital actions, such as paying dividends, implementing common equity repurchase programs or redeeming or repurchasing capital instruments The OCC requires JPMorgan Chase Bank, h a to perform separate, similar annual stress lests The Firm publishes each year the results of its mid cyrlp stress tesls under ihe Firm's internally-developed 'severely adverse" scenario and the results of its

(and its two primary subsidiary banks') annual stress tests under the supervisory "severely adverse" scenarios provided by the Federal Reserve and the OCC. The Firm will file its 2017 annual CCAR submission on April 5 Results will be published by ihe Federal Reserve by June 30, with disclosures of results by BHCs, including the Firm, to follow within 1G days. The mid-cycle capital stress test submissions are due on October 5 and BHCs, including the Tirm, will puhlish results by November A. For additional information on the Firm's CCAR, see Capital Risk Management on pages 76-85.

Enhanced prudential standards. The Financial Stability Oversight Council (TSOC), among other things, recommends prudential standards and reporting and disclosure requirements to the Federal Reserve for systemically important financial institutions ("SIFIs"), such as JPMorgan Chase The Federal Reserve has adopted several rules to implement the heightened prudential standards, including final rules relating to risk management and corporate governance of subiect Bud. BHCs with $50 billion or more in total consolidated assets are required to comply with enhanced liquidity and overall risk management standards, and their boards of directors are required to conduct appropriate oversight ol their risk management activities. For information on liquidity measures, see Liquidity Risk Management on pages 1] 0-115 Several additional proposed rules are still being considered, including an "early remediation* framework to address financial distress or material management weaknesses

Orderly liquidation authority and resolution and recovery As a CHC with assets of $ DO billion or more, the Firm is required to submit annually to the Federal Reserve and the FDIC a plan for resolution under the Bankruptcy Code in the event of material distress or failure (a "resolution plan") The FDIC also requires each insured depository institution with (50 billion or more in assets, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N A., to provide a resolution plan For more information about the Firm's resolution plan, see Risk Factors on pages 8-21 as well as Business Overview on pages 37-38 for information regarding the Firm's 2016 Resolution Submission. In addition, certain financial companies, including JPMorgan Chase and certain of its subsidiaries, can be subjected to resolution under an 'orderly liquidation authority" The U S Treasury Secretary, in consultation with the President ol the United Slates, must first make certain extraordinary financial distress and systemic risk determinations, and action must be recommended hy the FDIC and the Federal Reserve. Absent such actions, the Firm, as a BHC, would remain subject to resolution under the Bankruptcy Code In December 2013, the FDIC issued a draft policy statement describing its "single point of entry" strategy for resolution of systemically important financial institutions under the orderly liquidation authority This strategy seeks lo keep operating subsidiaries of the BHC open and impose losses on shareholders and creditors of the holding company in

Part I

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Regulatois in the u S anil abroad continue to be focused un developing measures designed to address the possibility or perception thai large financial institutions including the Firm, may tie "too big lo fail." and to provide safejitjairts so that it a :arg? financial institution does tail, it can be resolved without the use of public funds Higher rapnal surcharges on global svsiemiraily important hanks CGSiBs"). lequuemeiils lor certain laige bank holding companies (0 maintain a minimum amount of long term iteht lo facilitate orderly iesolu:inn ol thosp firms, and tne international Swaps ana Derivatives Association ("isda") protocol leiatmg to the "close-out" ol derivatives transactions during the resolution ol a large cross-border financial institution arc examples of initiatives to address "100 big to fail" For further information on the GSIB framework and Total Loss Absorbing Capacity (" TLAC), see Capital Risk Management on pages 7fi-85 and Risk Factors on pages 8-21. and on the ISDA close-out protocol, sec Derivatives regulation below

Holding company as source of strength (or bank subsidiaries JPMorgan Chase & Co is required to serve as a source ol financial strength for its depository institution subsidiaries and to commit resources to support those subsidiaries I his support may be required bv the Federal Reserve at limes when the Firm might otherwise determine not to provide 11 Regulation of acquisitions Acquisitions by bank holding companies and their banks are subject to multiple requirements by the Federal Reserve and the OCC For example, financial holding companies and bank holding companies are required to obtain the approval of the Federal Reserve before they may acquire more than 5% of the voting shares ol an unaflihated bank in addition, acquisitions by financial companies are prohibited if, as a ʳesull of the acquisition, the total liabilities of the financial company would exceed 10% of the total liabilities ot all financial companies in addition, for certain acquisitions, the Firm must provide written notice to the Federal Reserve prior to acquiring direct or indirect ownership or control of aiiv vonr.rj shares of an* con-nany *r,n over 110 udiion 111 assets 1:1.11 is engaged in ai 11 vines thai art "!in;iiicial m naiuit '

IPMorgan Chase's subsidiary banks-Tlie Firm s two primary Subsidiary banks IPUoigan Clias? Bank N A and cnase Bank USA, n a aie roic-insurec ■ national banks regulated by the OCC As nauona: banks the activities of JPMorgan Chase Bank. N A and Chase Bank USA. N A are limited 10 those specifically authorized under the National Bank Act and related interpretations by ihe OCC

IDIC deposit insurance The TDiC deposit insurance fund provides insurance coverage for certain Deposits and is funded through assessments on banks, such as JPMorgan Chase Bank, N A and Chase Bank USA. N.A Changes in the methodology used 10 calculate such assessments, resulting horn the enactment of the Dodd-Frank Act significantly increased the assessments thai Ihe Firm's bank subsidiaries pay annually 10 the FDIC. The FDIC instituted a new assessment surchaige un insured depository institutions wuh total consolidated assets greater than $10 billion in order lo raise the reserve ratio lor the FDIC deposit insurance lund Future FOiC rule-making could lurther increase such assessments

roiC powers upon a bank insolvency Upon the insolvency of an insured depository institution, such as JPMorgan Chase Bank. N.A . the f Die could be appointed as the conservator or receiver under [he Federal Deposit Insurance Act ("FDIA") The FDIC has broad powers lo transfer any assets and liabilities without Ihe approval of the institution's creditors For further information on the impact 10 creditors, see Risk Factors on pages 8-21 Cross-guarantee An TDIC-insurcd depository institution can be held liable for any loss incurred or expected to be incurred by the FDIC if another FDIC-msured institution that is under common conirol with such institution is in default or is deemed to be "in danger of default' (commonly referred to as "cross-guarantee" liability). An TDIC cross-guaramee claim against a depository institution is generally superior in right of payment to claims of Ihe holding company and its affiliates against such depository institution.

Prompt corrective action and early remediation The Federal Deposit insurance Corporation Improvement Act of 1991 requires the relevant federal banking regulator to take "prompt corrective action" with respect to a depository institution it that institution does not meet certain capital adequacy standards While these regulations apply only to banks, such as JPMorgan Chase Bank. N A. and Chase Bank USA. N.A . the Federal Reserve is authorized to take appropriate action against the parent BHC. such as JPMorgan chase & Co.. based on the undercapitalized status of any bank subsidiary. In certain instances, the BHC would be required to guarantee the performance of the capital restoration plan lor its undercapitalized subsidiary

OCC Hvigiifcnvd Surw'J'fis The OCC -las esiablisi-ji: guidelines selling lorth neighiened standards fo' - large ttanks l he guidelines establish minimum standards lor the design and implementation ol a risk governance framework for banks while the bank tan use certain components of the parent company s nsl governance 1-ainewnrk. the framework musi ensure that tne back's nsk profile rs easily distinguished and separate from the parent lor nsk management purposes The hank s hoard or risk committee is resnonsiDle for approving the banks nsk governance framework, providing active oversight of the bank's nsk-lakmg activities, and holding management accountable lor adhering to the nsk governance framework Restrictions on transactions with affiliates The hank subsidiaries of tPMoigan Chase (including subsidiaries ot those banks) are subject to certain resinriions imposed by federal law on extensions ol uertil lo. investments m slot k or securities of. and derivatives, securities lending and certain other transactions with. JPMorgan Chase & Co and cei tain other affiliates These restrictions prevent iPMurgan Chase S Co and oilier affiliates from borrowing horn such subsidiaries unless the loans are settned m specified amounts and comply with certain other requirements for moie iiilormanon, see Note 27 In addition, the Volcker Rule imposes a prohibition on such transactions between anv JPMorgan Chase pntity and covered funds for which a JPMorgan Chase entity serves as the investment manager, investment advisor, commodity trading advisoi or sponsor, as well as, subject to a limited exception, any covered fund controlled by such funds

Dividend restrictions Federal law imposes limitations on Hie payment of dividends by national banks, such as JPMorgan Chase Bank. N A and Chase Bank USA. N A See Note 27 for Ihe amount of dividends lhat the Firm's principal bank subsidiaries could pay, at lanuary l, 2017. to their respective bank holding companies without the approval of then banking regulators

In addition to the dividend restrictions described above, the OCC and the Federal Reserve have authority to prohibit or limit the payment of dividends of the bank subsidiaries they supervise, if. in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the bank Depositor preference Under federal law, the claims of a receiver of an insured depository institution for administrative expense and the claims of holders of U.S. deposit liabilities (including the FDIC and foreign deposits that are payable m the U S. as well as in a foreign branch) have priority over the claims of other unsecured creditors of the institution, including public noteholders and depositors in non-U.S ofiices. As a result, such persons could receive substantially less than the depositors in u S offices of the depository institution

CFPB regulation and supervision, and other consume.! regulations. JPMorgan Chase and its national bank subsidiaries, including JPMorgan Chase Bank. N.A and Chase Bank USA. n a., are subject to supervision and

■■erjulatirii- :iy ::ie crr>3 with .'especi 10 federal lunsnne" protection laws mr ᶦudinj; laws relating to lan lending and ihe prohibition ol unfair deceptive or abusive acts or practices m connection wnti ihe oiler sale or provision of consumer financial products and services ihese laws include the Trutli-in-Lemling, tqual Credit Opportunity Act ("tCOfi") F.111 Cred t Repoi tmg. 1 air Debt Collection Practice, Flcctromc Funds transfer, Credit Caid Accountability. Responsibility and Disclosure ("CARD") and Home Mortgage Disclosuie Acts The CJ PB has authority 10 impose new disclosure requirements foi any consumer financial product or service The CFPB's rule-making efforts have addressed montage-rotated topics, including ability to repay and qualified mortgage standards, mortgage sei vicing standards, loan originator compensation standards, high-cost mortgage requirements. Home Mortgage Disclosure Act requirements, appraisal and esrrow standards and requirements for higher-priced mortgages the CFPfj continues to issue informal guidance on a variety of topics (such as the collection of consumer debts and credit card marketing practices) Other areas of locus include sales incentives, pre-authonzed electronic funds transfers, "add on" products, matters involving consumer populations considered vulnerable by the CFPB (such as students), credit reporting, and the furnishing of credit scores to individuals As part of its regulatory oversight, the CFPB has taken enforcement actions against certain financial institutions, including the Firm Securities and broker-dealer regulation: ihe Firm condurls securities underwriting, dealing and brokerage activities in the U S through J P Morgan Securities LLC and other broker-dealer subsidiaries, all of which are subject to regulations of the SEC, the Financial Industry Regulatory Authority and the New York Stork Lxchange, among others. The Firm conducts similar securities activities outside the U S subject to local regulatory requirements In Ihe U.K . those activities are conducted by 1P Morgan Securities pic and are regulated PRA and the FCA. Broker-dealers are subject to laws and regulations covering all aspects of the securities business, including sales and trading practices, securities offerings, publication of research reports, use of customers' funds, the financing of clients' purchases, capital structure, recordkeeping and retention, and the conduct of their directors, officers and employees For information on the net capital of J P Morgan

Securities LLC. and the applicable requirements relating to risk-based capital for J P. Morgan Securities pic, see Broker-dealer regulatory capital on page 85 in addition, rules adopted by the Department of Labor would impose (among other things) a new standard of care applicable to broker-dealers when dealing with customers. For more information see - investment management regulation below.

Investment management regulation. The Firm's asset management businesses arc subject to significant investment management regulation in numerous jurisdictions around the world relating 10, among other things, the safeguarding of client assets, offerings ol lunds, marketing activities, transactions among affiliates and management of client funds Certain of the Firm's subsidiaries are registered with, and subject 10 oversight by. the SEC as investment advisers As such, the Firm's registered investment advisers are subject to the fiduciary and other obligations imposed under the investment Advisers Act of 1940 and the rules and regulations promulgated thereunder, as well as various state securities laws. Tor information regarding investigations and litigation in connection with disclosures to clients related to proprietary products, see Note 31 The Firm's asset management businesses continue to be affected by ongoing rule-making and implementation ot new regulations The SEC amendments to rules that govern money-market funds, requiring a Moating net asset value for institutional prime money -market funds became effective October 14, 2016. in addition, the SEC adopted amendments regarding enhanced liquidity risk management lor open-end mutual funds and exchange-traded funds ("ETFs") and enhanced reporting for funds and advisois The Department of Labor ("DOL") "fiduciary" rule would significantly expand the universe of persons viewed as investment advice fiduciaries to retirement plans and individual retirement accounts ("IRAs") under the Employee Retirement income Security Act of 1974, as amended ("ERISA") Among the most significant impacts of the rule and related prohibited transaction exemptions would be the impact on the fee and compensation practices at financial institutions that offer investment advice to retail retirement clients The related exemptions would require new client contracts, adherence to "impartial conduct' standards (including a requirement to act m the "best interest" of retirement clients), implementation of policies and procedures, websites and other disclosures to both investors and the DDI. the rule was due to become applicable Irom April 10, 2017, however following a recent memorandum Irom the White House directing review ol the rule, the OOL announced that it is considering legal options for delaying the rule's applicability Derivatives regulation:

The Firm is subject to comprehensive regulation of its derivatives businesses The regulations impose capital and margin requirements (including the collecting and posting of variation margin and initial margin m respect of nun-ceutrally cleared derivatives), reque central clearing of standardized overthecou'itei ("OTC") derivatives, require that certain standardized over-the-counter swaps he traded on regulated trading venues, and provide for reporting of certain mandated information In addition, the Dodd-Frank Ad requires the registration of "swap dealers" and "maior swap participants' with the CFTC and of "security-based swap dealers" and "major security-based swap participants" with the SEC JPMorgan Chase Bank, N.A , I P Morgan

Securities LLC. J.P Morgan Securities pic and J P. Morgan ventures F.nergy Corporation have registered with the CFTC as swap dealers, and JPMorgan Chase Bank, N A, J P. Morgan Securities LLC and I P Morgan Securities pic may he required to register with the SEC as secunty-based swap dealers, as a result of their registration as swap dealers or security-based swap dealers, these entities will be subject 10 a comprehensive regulatory framework applicable to then swap or security-based swap activities, which includes capital requirements, rules regulating iheir swap activities, rules requiring the collateralization of uncleared swaps, rules regarding segregation of counterparty collateral, business conduct and documentation standards, recordkeeping and reporting obligations, and anti-fraud and anti-manipulation requirements. Further, some of the rules for derivatives apply extratemtonally to U S. firms doing business with clients outside of the U S, as well as to the overseas activities of non-U.S. subsidiaries ol the Firm that either deal with u S. persons or that are guaranteed by U.S. subsidiaries of the Firm, however, the full scope of the extra-territorial impact of the U S swaps regulation has not been finalized and therefore remains unclear. The effect of these rules may require banking entities, such as the Firm, to modify the structure of their derivatives businesses and face increased operational and regulatory costs, in the European Union (the "EU"). the implementation of the European Market Infrastructure Regulation ("EMIR") and the revision of the Markets in Financial Instruments Directive ("MiFID it") will result in comparable, but not identical, changes to the European regulatory regime for derivatives. The combined effect of the u S and EU requirements, and the potential conflicts and inconsistencies between them, present challenges and risks to lhe slruciure and operating model of the Firm's derivatives businesses

The Firm and other financial institutions have agreed to adhere to an updated Resolution stay Protocol developed by ISDA in response to regulator concerns that the close-out of derivatives and other financial transactions during the resolution ot a large cross-border financial institution could impede resolution efforts and potentially destabilize markets The Resolution Stay Protocol provides lor the contractual recognition of cross-border slays under various statutory resolution regimes and a contractual stay on certain cross-default rights

in the U S . one subsidiary ol the firm is registered as a futures commission merchant, and other subsidiaries are either registered with the CFTC as commodity pool operators and commodity trading advisors or are exempt from such registration. These cnc-regislered subsidiaries arc also members of the National ruturcs Association Data regulation.

T he Firm and its subsidiaries are subject to federal, state and international laws and regulations concerning the use and protection of cei I am customer, employee and other personal and confidential information, including those imposed by the Gramm-Leach-Bliley Act and the Fair Credit

Report me Act, as well as the EU Data Protection Directive In addition, various U.S regulators, including the Federal Reserve, the OCC and the SCC, have increased their focus on CYbersecunty through guidance, examinations and regulations

in May 2018. the General Data Protection Regulation ("GDPR") will replace the EU Data Protection Directive, and it will have a significant impact on how businesses can collect and process the personal data of CU individuals In addition, numerous proposals regarding privacy and data protection are pending before U.S and non-U S legislative and regulatory bodies

The Bank Secrecy Act and Economic Sanctions: The Bank Secrecy Act ("BSA") requires all financial institutions, including hanks and securities broker-dealers. 10. among other things, establish a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism The BSA includes a variety of record-keeping and reporting requirements (such as cash transaction and suspicious activity reporting), as well as due diligence/know your customer documentation requirements In January 2013, the Firm entered into Consent Orders with its banking regulators relating to the Firm's Bank Secrecy Acl/Anti-Money Laundering policies, procedures and controls, the Finn has taken significant steps to modify and enhance its processes and controls with respect to its Anti-Money Laundering procedures and to remediate the issues identified in the Consent Order. The Firm is also subject to the regulations and economic sanctions programs administered by the u S. Treasury's Office of Foreign Assets Control ("OFAC") Anti-Corruption:

The Firm is subject to laws and regulations relating to corrupt and illegal payments to government officials and others in the jurisdictions in which it operates, including ihe U.S. Foreign Corrupt Practices Act and the u K Bribery Ad. For more information on the Firm's consent judgment and non-prosecution agreement relating to referral hiring practices, see Note 31 Compensation practices

The Firm's compensation practices are suhiect to oversight by the Federal Reserve, as well as other agencies The Federal Reserve has issued guidance jointly with the FDIC and the OCC that is designed to ensure that incentive compensation paid by banking organizations does not encourage imprudent risk-taking (hat threatens the organizations' safety and soundness In addition, tinder the Dodd-Frank Act, federal regulators, including the Federal Reserve, must issue regulations or guidelines requiring covered financial institutions, including the Firm, to report the structure of all incentive-based compensation arrangements and prohibit incentive-based payment arrangements that encourage inappropriate risks by providing compensation lhat is excessive or that could lead 10 material financial loss to ihe institution Proposed regulations were issued in 2016. and (he public comment period has closed Final regulations have not yet been

published The Federal Reserve has conducted a review ol the incentive compensation policies and practices of a . numher of large hanking institutions, including the Firm In addition to the Federal Reserve, the Financial Stability Board has established standards covering compensation principles for banks. In Europe, the Fourth Capital Requirements Directive ("CRD IV) includes compensation provisions and the European Banking Authority has instituted guidelines on compensation policies under CRD IV in the U K.. compensation standards are governed by the Remuneration Code of the PRA and the FCA. The implementation ol the Federal Reserve's and other banking regulators' guidelines regarding compensation are expecled lo evolve over the next several years, and may affect the manner in which the Firm structures its compensation programs and practices.

Significant International regulatory initiatives: In the tu. there is an extensive and complex program of final and proposed regulatory enhancement lhat reflects, in part. lhe EU's commitments to policies of the Group ol Twenty Finance Ministers and Central Bank Governors ("G-20") together wuh oilier plans specific to the EU The EU operates a European Systemic Risk Board that monitors financial stability, together with European Supervisory Agencies that set detailed regulatory rules and encourage supervisory convergence across the 28 Member States The EU has also created a Single Supervisory Mechanism for the euro-zone, under which the regulation of all banks in that zone will be under the auspices ot the European Central Bank, together with a Single Resolution Mechanism and Single Resolution Board, having jurisdiction over bank resolution in the zone. At both the G-20 and EU levels, various proposals are under consideration to address risks associated with global financial institutions Some of the initiatives adopted include increased capital requirements lor certain trading instruments or exposures and compensation limits on certain employees located in affected countries.

Guided by the G20 policy framework, the Fll and national financial regulators have proposed or adopted several market reforms, including EMIR, which requires, among other things, the central clearing of standardized derivatives, and MiFID It. which gives effect to the G-20 commitment to trading of derivatives through central clearing houses and exchanges and also includes signilicantly enhanced requirements for pre- and post-trade transparency and a significant reconfiguration of the regulatory supervision of execution venues Key aspects of EMiR and MiFID It have been finalized, although the implementation date of MiFID ll has been delayed lo 2018 The FU is also currently considering or implementing significant revisions to laws covering depositary activities; credit-rating activities, resolution of banks, investment firms and market infrastructures, anti-money laundering controls, data security and privacy; corporate governance in financial lirms. and implementation in the EU of the Basel III capital and liquidity standards, including the introduction of

Part i

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l:'e i'l s aKo consider ni; riru;>;».;'ri l.-jj-slatiiHi providing lor a proDct'iarv iraiiimj pan and mandatory separation of otner trading activities wiirim certain banks various f u Member states tiave seaaraielv en.icied similar measures In me u t; legislaiion was annpit-rs ;:iat inanriaies the separation (or "ruig-tencmg") ui deposit-taking activities from -.pi urmes fading and other analogous activities wilhin Hanks sii.'tiect to certain e»em"tions Tin- legislation inrlu(i(:s iiie supplemental recommendation o [1] the Pa'liameniarv Con Mission on Banning Standards line "lvne Commission") that «.ucli ring-fences Should hp "electnhed" Ov the imposition ol mandatory forced separation on banking institutions that are deemed 10 lest the 11mus of the safeguards Parallel bui distinct provisions have been enacied by the Frenth and German governments lhese measures may snnn'atelv or taken together have significant implications tor me rum's oiganizaiional structure in Europe, as weti as its nermnied activities and capital deployment m ihe Eu Much of the G20 policy Ira me work has been llnali/ed. however the Base' Committee is i urrently reviewing the framework, and proposing lecalibrations ol certain requirements As such me Hi is considering or implementing significant revisions to laws covering bank and investment firm recovery and resolution, bank structure, secui Hies settlement transparency and disclosure ot securities financing transacnons. benchmarks, resolution of maiket infrastructures (central counterparties ("CCPs")} anti-money laundering controls, data security and privacy, and corporate governance in financial firms, together with new amendments to capital and liquidity standards

Consistent wim the G20 and EU policy irameworks, U.K regulators have adopted a range of policy measures that have significantly changed the markets and prudential regulatory environment in the U K. in addition to broad recommendations made by the Fair and Effective Markets Review which focused on fixed income currencies and commodities markets, U K regulators are considering measures to raise standards and an duinability of individuals, and promote lorwaid-looking conduct nsk ideniiirdtion and mitigation, including by introducing the new Senior Managers and Certification Regimes On June 23. 2016 the u K voted by referendum to leave the European union ("Brexit") The U.K Government has since announced lhat it will invoke Article 50 of the Lisbon Treaty and will start the formal exit negotiations by the end of March 2017, giving an expected pxil date of the end ot March 201° More recently, the British Prime Minister laid out twelve 'negotiation objectives" tor Brexil, which confirmed the U K will not remain a member of the Single Market, but will pursue a Free Trade Agreement that provides the greatest possible access to the Single Market Further, the U.K Government will seek a phased arrangement to ensure the orderly iransition ot ihe legal and regulatory lranu'worL lor financia [1] services and promote sunnily and m.ukei con'idenco 'oUowi'ifi a rect-m 'ulmg by Hie U.K Supreme Court the naiisc of amnions app'oved legislation on February 8 2017 ihai ahows the Briirsn Pnme Minister to invoke Article SO the legislation must now l>p approved by me House ot lords nelore it is signed mto law

Many international banks, including the Firm operate substantial pai is of their European Union businesses lrom entities based in the U f, upon the UK leaving ihe European union, the regulatory and legal environment thai would then exist and to which the Firm's tl K ooe ʳanons would then be subject, witi depend on. in certain respects, the nature of the arrangements (tie U K agreed with the European Union and other trading partners These arrangements cannot be predicted, but currently me rum does not believe any of the likely identified scenarios would threaten the viability ol the Firm's business units or ihe Firm's ahilny to serve clients across the European Union and in the U K However, it is possible that undei some scenarios, changes lo the Firm's legal entity structure and operations would be required, which might result in a less efficient operating model across the Firm's European legal entities.

The Firm is in the process of evaluating plans to ensure its continued ahilily to operate m the U K and lhe EU beyond the expected exit date

item ia. Risk Factors.

The following discussion sets forth the material risk factors that could affm f JPMorgan Chase's financial condition and operations. Readers should not consider any descriptions of such (actors to be a complete set of alt potential risks that could affect the firm Regulatory Risk

JPMorgan Chase operates within a highly regulated industry, and the Firm's businesses and results are significantly affected by the laws and regulations to which the Firm tl subject.

As a global financial services firm, JPMorgan Chase is subject to extensive and comprehensive regulation under ledcral and slate laws in the U.S. and the laws of the various jurisdictions outside the U S m which the Finn does business ihe financial services industry has in recent years experienced an unprecedented increase in regulations and supervision, both in the U.S and globally The cumulative effect of the new and currently proposed legislation and regulations could require the Firm to make further changes to its businesses or operations, which could result m a significant loss of revenue for the Firm and impose additional compliance and other costs on the firm or otherwise reduce (he Firms probability These changes could also limit the products and services that the Firm offers, reduce the liquidity lhat the Firm is able to offer its clients or counterparties through its market-making activities, impede the Firm's ability to pursue business opportunities in which it might otherwise consider engaging, require lhe Firm to dispose of or curtail certain

businesses allt-c; the value ol assets thai the nrm holds rpqiiii" lhe drill)fi increase us pi ices and therein:e re:lnC(-tlemanc 'or its p:ortu:lr. oi otnerwis* advecely allect me i- i.-m s businesses lo tne extent ma; those initiatives nave been oi continue to be, imposed on 4 limited subset u'. lmanciai institutions (based on size, activities geography or other criteria). lhe requirements 10 winch the Firm may be subject under such laws and regulations could require ine Finn 10 restructure lurther its businesses, or further rc-pnee or curtail ihe products or services that it of lns to customers, which could[result m lhe Firm not being able to compete effectively with other insuii.:iolis that are no: impacted m the sane way

Authorities in some non-U S jurisdictions in which ihe Firm has operations havp enacted legislation or legulations lequinng mat certain subsidiaries ol ihe firm operating m those countries maintain independent capital and hauidiiy In addmon. some non-U.S regulators have proposed mat large banks which conduct certain businesses in their jurisdictions operate through separate subsidiaries located in those countries These requirements, and any future laws or regulations that seek to impose restrictions on the way the Firm organizes its business units or m< rease the capual or houidity requirements on non-u S subsidiaries of lhe Firm, could hinder the Firm's ability to efficiently manage its operations, increase its lunding and licuidily costs and thereby decrease the Firm's net income. In addition, there can be significant differences in the ways that similar regulatory initiatives affening the financial services industry are implemented in the U S ana in diflerent countries and regions m which JPMorgan Chase does business For example, recent legislative and regulatory initiatives within the EU, including those relating 10 the resolution of financial institutions, the establishment by non-EU financial institutions of intermediate holding companies in the EU, the separation of trading activities from core banking services, mandatory on-exchange trading, position limits and reporting rules for derivatives, governance and accountability regimes, conduct of business requirements and restrictions on compensation, could require the Firm to make significant modifications to ilS non-U S business, operations and legal entity structure in order to comply with these requirements These differences in implemented or proposed non-U S regulations and initiatives may he inconsistent or may conflict with current or proposed regulations in the u S., which could subject ihe Firm 10 increased compliance and legal costs, as well as higher operational, capital and liquidity costs, all of which could have an adverse effect on the Firm's business, results of operations and profitability

Recent political developments in the U.S and abroad have increased the uncertainty regarding the regulatory environment in which the Firm will operate Although certain of the proposals being mentioned in (he u S include the possibility of regulatory reform related to the financial services industry, it is too early to determine the full extent to which these measures will ultimately modify or reduce the regulatory requirements currently imposed on the Firm, and the resulting possible effect on the Firm and its business and operations, in addition, the U.K's planned

departure irom Hie EU na; engendered significant unreitainty LO'ifeming ihe re^ulainry lrampwork uiirler whi:ii global financial services institutions including li'Morgan Chase, will need in i onrluct their business and operations m ihe EU afier ihe u K s departure Expanded regulatory and governmental oversight of JPMorgan Chase's businesses may continue to increase ihe Firm's costs and risks. The rirm's businesses and operations ar« sufjject Co neigmened governmental and regulatory oversight and scrutiny the Finn has paid significant fines (or has provided significant monetary and oilier relief) 10 resolve a number of investigations or enforcement actions by governmental agencies The Firm continues lo devote substantial resources to satisfying the requirements ol regulatory consent orders and other seitlements to which it is subject, whirh increases the Firm's operational and compliance costs

Ceitam regulators have taken measures in connection with specific enlorcemenl actions against financial institutions (including the Firm) that require admissions of wrongdoing and compliance with other conditions m connection with settling such matters Such admissions and conditions can lead to. among other things, greater exposure in civil litigation, harm to reputation, disqualification from providing business to certain clients and in certain jurisdictions, and other direct and indirect adverse effects in addition. U S government officials have indicated and demonstrated a willingness to bring criminal actions against financial institutions, including the Hrm. and have increasingly sought, and obtained, resolutions that include criminal pleas or olher admissions of wrongdoing from those institutions, such as the Firm's agreement in May 201 b to plead guilty to a single violation of federal antitrust law in connection with its settlements with certain government authorities relating to its foreign exchange sales and trading activities and controls related to those activities, and the non-prosecurwn agreement entered into by a subsidiary of the Firm with the U S. Department of Justice in November 2016 in connection with settlements to resolve various governmental investigations relating to a former hiring program for candidates referred by clients, potential clients and government officials in the Asia Pacific region Such resolutions, whether with U S or non-U 5 authorities, could have significant collateral consequences lor a subject financial institution, including loss of customers and business, or the inability to oiler certain products or services, or losing permission to operate certain businesses, for a period of time (absent the forbearance of, or the granting of waivers by, applicable regulators) The Firm expects that it and the financial services industry as a whole will continue to be subject to regulatory scrutiny and governmental investigations and enforcement actions and that violations of law will more frequently be met with formal and punitive enforcement action, including the imposition of significant monetary and other sanctions, rather lhan with informal supervisory action In addition, it the Firm fails to meet the requirements ot the various governmental settlements to which it is subject, or more

generally, 10 maintain risk and control procedures and processes that meet the heightened standards established by its regulators and other government agencies, it could be required 10 enter into further orders and settlements, pay additional fines, penalties or judgments, or accept material regulatory restrictions on its businesses The extern ol the Firm's exposure to legal and regulatory matters may be unpredictable and could, in some cases, substantially exceed the amount of reserves that the Firm has established for such matters

Requirements for the orderly resolution of the Firm could require JPMorgan Chase to restructure or reorganize its businesses.

Under Title 1 of the Dodd-Frank Act ("Title I") and Federal Reserve and FDIC rules, the nrm is required to prepare and submit periodically to the Federal Reserve and the FDIC a detailed plan (the 'Resolution Plan") for the rapid and orderly resolution, without extraordinary government support, ol JPMorgan Chase ft Co and certain of its subsidiaries under the U S Bankruptcy Code and other applicable insolvency taws in the event of (ulure material financial distress of the Firm.

In April 2016, the Federal Reserve and the FDIC jointly provided firm-specific feedback on the 2015 Resolution Plans of eight systemically important domestic banking institutions, and determined that five of these 2015 Resolution Plans, including that ol the Firm, were not credible or would not facilitate an orderly resolution under the U.s Bankruptcy Code In addition to lhe identified deficiencies, ihe Federal Reserve and the FDIC also identified certain shortcomings which were required to be satisfactorily addressed in ihe Firm's Resolution Plan due on July 1, 2017 On October I. 2016. the Firm filed with (he Federal Reserve and the TDic its submission (the "2016 Resolution Submission") describing how ihe Firm remediated the identified deficiencies and providing a status report ol its actions to address the identified shortcomings

On Oc-cember] 3. 2016. the Federal Reserve and the TDiC adwsw the Firm ol their determinations that the Firm's 2016 Resolution Submission adequately remediated the deficiencies in the rirm's 2015 Resolution Plan identified by (he agencies On July 1, 2017, the Firm will file wuh ihe Federal Reserve and the FDIC its 2017 Resolution Plan winch will, among other things, describe how the Tirm has remetiiated the remaining shortcomings identified by ihe agencies in April 2016 ll the Federal Reserve and the FDIC were to jointly determine that the Firm did not remediate the identified shortcomings. 01 that the Firm's 2017 Resolution Plan, or any future update of that plan, is not credible, and the Firm is unable to remedy the identified deficiencies in a timely manner, the regulators may inintly imprie more stringent capital, leverage or liquidity requirements on the Firm 01 restrictions on growth, activities or operations of (he Tirm. and could, if such defiriennes are not remedied within two years after such a determination, require the Firm to restructure, reorganize or divest businesses, legal entities, operational systems and/or intercompany transactions in ways lhat could

materially and adversely affect the Firm's operations and strategy In addition, in order to continue to maintain a Title

I Resolution Plan that the Federal Reserve and FDtC determine is credible, lhe Firm may need to make additional changes to its legal entity structure and to certain intercompany and external activities, which could result in increased funding or operational costs Holders of JPMorgan Chase's debt and equity securities will absorb losses if JPMorgan Chase were to enter into a resolution.

The Federal Reserve has issued final rtifes (the TLAC rules") regarding the minimum levels ol unsecured external long-term debt and other loss-absorbing capacity that bank holding companies are required to have issued and outstanding, as well as guidelines defining the terms of qualifying debt instruments, 10 ensure that adequate levels of debt are maintained at the holding company level for purposes of recapitalizing the Firm's operating subsidiaries ("eligible LTD") if JPMorgan Chase A Co were to enter into a resolution, either in a proceeding under Chapter 11 of the U.S Bankruptcy Code or in a receivership administered by the FDIC under Title ll ot the Dodd-Frank Act, holders of eligible LTD and other debt and equity securities of the Firm will absorb the losses of JPMorgan Chase ft Co. and its affiliates.

Under the Firm's Resolution Plan, the Firm's preferred resolution strategy contemplates that only JPMorgan Chase & Co would enter bankruptcy proceedings under Chapter

II of the U S Bankruptcy Code pursuant to a "single point of entry" recapitalization strategy. JPMorgan Chase ft Co's subsidiaries would be recapitalized as needed so that they could continue normal operations or subsequently be wound down in an orderly manner. As a result, JPMorgan Chase & Co's losses and any losses incurred by its subsidiaries would be imposed tirst on holders of JPMorgan Chase ft Co.l equity securities and thereafter on unsecured creditors, including holders of JPMorgan Chase & Co's eligible ltd and other debt securities. Claims of holders of those debt securities would have a junior position to the claims of creditors of JPMorgan Chase & Co's subsidiaries and to the claims ot priority (as determined by statute) and secured creditors of JPMorgan Chase ft Co. Accordingly, m a resolution of JPMorgan Chase ft Co under Chapter 11 of the U.S Bankruptcy Code, holders of eligible LTD and other debt securities of JPMorgan Chase & Co. would realize value only to the extent available 10 JPMorgan Chase & Co as a shareholder of JPMorgan Chase Bank. N.A and its other subsidiaries, and only alter any claims of priority and secured creditors ol JPMorgan Chase ft Co have been lully repaid If JPMorgan Chase ft Co were lo enter into a resolution, none of JPMorgan Chase ft Co.. the Federal Reserve or the FDIC is obligated to follow the Firm's preferred resolution strategy under its Resolution Plan

The FDIC has similarly indicated that a single point ot entry recapitalization model could be a desirable strategy to resolve a systemically important financial institution, such as JPMorgan Chase ft Co, undei Title ll ot tne Dodd-Frank Act Pursuant to that strategy. Ihe FDIC would use its power to create a "budge entity" for JPMorgan Chase ft Co .

transfer the systemically important and viable parts of us business, principally Ihe stock of JPMorgan Chase ft Co's main operating subsidiaries and any intercompany claims against such subsidiaries, to the bridge entity; recapitalize those subsidiaries using assets ot JPMorgan Chase ft Co that have been transferred to the bridge entity, and exchange external debt claims against JPMorgan Chase & Co. for equity in the bridge entity Under this Title ll resolution strategy, the value of the stock of the bridge entity that would be 1 edistnbuted to holders of eligible LTD and other debt securities of JPMorgan Chase & Co may not be sufficient to repay all or pari of the principal amount and interest on such securities To date, the FDIC has not formally adopted a single point of entry resolution strategy and it is not obligated to follow such a strategy in a Title li resolution of JPMorgan Chase & Co. Market Risk

JPMorgan Chase's results of operations have been, and may continue to be, adversely affected by U.S. and global financial market and economic conditions and political developments.

JPMorgan Chase's businesses are materially affected by economic and market conditions, including the liquidity of the global financial markets; the level and volatility of debt and equity prices, interest rates, currency and commodities prices (including oil prices) and other market indices, investor, consumer and business sentiment, events that reduce confidence m the financial markets: inflation and unemployment, the availability and cost of capital and credit; the economic effects of natural disasters, health emergencies or pandemics, severe weather conditions, outbreaks of hostilities, terrorism or other geopolitical instabilities, monetary policies and actions taken by the Federal Reserve and other central banks, and the health of the U S and global economies

Recent political developments in the u.s and abroad have increased the uncertainty regarding Ihe economic environment in which the Firm will operate Although certain of the proposals heing considered in the U S , such as tax reform or increased expenditure on infrastructure projects, could lead to higher levels of u.S economic activity and more expansive U.S. domestic economic growth, others, such as protectionist trade policies or isolationist foreign policies, could contract economic growth The uncertainty around the manner and extent to which these economic policies are ultimately enacied could impact market volatility and affect the Firm's businesses, both directly and through their impact on the businesses and activities of the rirm's clients and customers In addition, the effects of various referenda in Europe, including the vote by the U K electorate to leave the EU, as well as the uncertainties regarding the outcome of Eurozone presidential elections m 2017, have triggered political and economic uncertainly in the Eurozone There is no assurance lhal such uncertainty, and any resultant market volatility, will not adversely alfect the Firm's results of operations

tn the Firm's wholesale businesses, market and economic factors can affect the volume of transactions that the Firm

executes for its clients and, therefore, the revenue that the Firm receives, as well as the willingness of other financial institutions and investors to participate in loan syndications or underwriting managed by the Firm The Firm generally maintains market-making positions in the fixed income, currency, commodities, credit and equity markets to facilitate client demand and provide liquidity to clients. The revenue derived from these positions is affected by many factors, including the Firm's success in effectively hedging its market and other risks, volatility in interest rates and equity, debt and commodities markets; interest rate and credit spreads; and the availability of liquidity tn the capital markets, all of which are affected by global economic and market conditions, political events and regulatory restrictions on market-making activities. In addition, the Firm's market-making businesses can expose the rirm to unexpected market, credit and operational risks that could cause the Firm 10 suffer unexpected losses. Severe declines m asset values, unanticipated credit events, or unloreseen circumstances that may cause previously uncorrected factors to become correlated (and vice versa) may create losses resulting from risks not having been appropriately taken into account in the development, structuring or pricing of a (inancial instrument The Firm may be adversely affected by declining assel values. This is particularly true for businesses that earn fees for managing third-party assets or receive or post collateral For example, a higher level of U.S or non-U-S. intercst rates or a downturn in financial markets could affect the valuations ol the client assets that the Firm manages or holds in custody, which, in turn, could affect the Firm's revenue from fees that are based on the amount or assets under management or custody. Macroeconomic or market concerns, as well as legislative and regulatory developments (such as. for example, the recently-adopted SEC rules relating to money-market lunds), may also prompt outflows from the Firm's funds or accounts or cause clients to invest lunds in products that generate lower revenue.

Changes in interest rates will affect the level of assets and liabilities held on the Firm's balanre sheet and the revenue that the Firm earns from net interest income. An increasing or high interest rate environment, while generally increasing the net interest income earned by the Finn, may under certain circumstances also result in lower levels ol commercial and residential loan originations and diminished returns on the investment securities portfolio (lo the extent thai the Firm is unable to reinvest contemporaneously in higher-yielding assets), thereby adversely affecting the Firm's revenues and capital levels Conversely, a low interest rate environment may compress net interest margins, reducing the amounts that the Firm earns on its investment securities portfolio, or reducing the value ot its mortgage servicing rights ("MSRs") asset, thereby reducing the Firm's net interest income and other revenues

The Firm's consumer businesses are particularly affected by U S. domestic economic ronditions. including U S interest

Part I

rates tin- r.iif- Ot uwrnnlovn.-ft housing price [1], ine icvel w cfiiisurner cfin.'ij'.'nfc .urges •r (w\;:nwf speidrt; ami the fiji:i:M'r ;i' personal r.ankn:p:f ics Suit a-ltd 'ow growth i" IV U S economy :«u'i1 diirnmn c!c?rTi xiii1 lo' the p'OduCIS iinC services nilertd by the rum's consumer businesses or incr«ase tne cost to provide such products and services in addition adverse econuinic conditions such as economic dislocations m cer;am geograpmes due 10 nigh levels ol unemployment untitling Irom declining indL-sinal or manufacturing activity or other market or ei ononuc factors could leao to an increase in mortgage credit card. nuiCj student ann otne r loan d-.-linnutncies and hignei net charge olts which tan reduce the' irm' [1]. eainings The

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adversely alfecieo by changes in government policies that alien consumers including Uiose relating to medical insurance 'immigration employment status and taxation, as well as governmental policies aimed ai the economy more broadly siir.h as infrastructure spending and global trade, whirii rould tesull in. among oilier things higher inflation oi leductions in consumer disposable inrnmr; Widening ol credit spreads makes it more expensive lor ihe ' irni to borrow on both a secured and unsecured basis, and may adversely a I feci the riedit markets and the Firm's businesses Credit spreads widen or narrow noi only m resrwnse to riim-soecific events and urcuinstances, but also as a result of general economic and geopolitical events and conditions Changes in the Firm s credit spreads will impact. posiliveJy or negatively, the rirm's earnings on certain liabilities thai are recorded at 'air value Sudden and significant volatility in the prices of securities and oilier assets (including loans and derivatives) may curtail the iradmg markets for such securities and assets, make il dilhcult to sell or hedge such securities and assets, adversely affeel the Finn's profitability, capnal or liquidity, or increase the Firm's funding costs The Federal Reserve has recently observed that market volatility may be exar.ertiaied by regulatory restrictions, as market participants lhat aie subject lo the Volckcr Huly are likely to decrease their market-making activities, and thereby constrain market liquidity, during periods of market stress in addition, in a difficult or less liquid market environment, the Firm's risk management strategies may not be effective because other markei participants may be attempting to use die same or similar strategies to deal with the challenging market conditions In such circumstances, it may be dilhcult for the Firm to reduce its risk positions due tc the activity of such other market participants or widespread market dislocations Sustained volatility in (he financial markets may also negatively aflecl consumer or invijstor confidence, winch could lead to lower client activity and decreased revenue lor the I irm

The financial condition of JPMorgan Chase's clients and counterparties, particularly other financial institutions, could adversely affect the Firm The Firm routinely executes transactions with rln-nts and counterpailies in the (manual services industry, including brokers and dealers commercial hanks investment banks mutual and hedge funds, investment managers and other types of financial institutions Many of these transactions expose the Firm to the credit risk ot us counterparties and in some cases, disputes and litigation in the event of a delault by the counterparty or client Disputes with counterparties may also arise regarding Hie terms or :he settlement procedures ol derivative contracts, including with respeci to the value of underlying coltatciat. which could cause the Firm to incur unexpected costs, including transaction operational, legal and litigation costs, or result ■n credit losses, all of which may impair the Firm's ability to manage effectively its credit risk exposure from these pioducts the failure of a significant market participant, or concerns about a delault by such an institution, could also lead to significant liquidity problems (or, or losses or defaults by, other institutions, which in turn could adversely affeel I tie Firm, in addition, m recent years the perceived interrelationship among financial institutions has also led to claims by other market participants and regulators that the Firm and other financial institutions have allegedly violated anti-trust or ami-competition laws by colluding to manipulate markets, prices or indices, and there is no assurance that such allegations will not arise in the same or similar contexts m the future.

As part ol providing clearing services, the Fum is a member of a number ot CCPs, and may be required to pay a nor don ol the losses incurred by such organizations as a result ol the default ol other members. As a clearing member, the Firm is also exposed to the risk of non-performance by us clients, which it seeks lo mitigate through the maintenance of adequate collateral in addition, the Firm can be exposed to intra-day credit risk of US clients in connection with providing rash management, clearing, custodial and other transaction services to such clients. If a client for which the Firm provides such services becomes bankrupt or insolvent, the Firm may suiter losses, become involved in disputes and litigation with various parties, including one or more CCPs. or the client's bankruptcy estate and other creditors, or involved in regulatory investigations All of such events can increase (he Firm's operational and litigation costs and may result in losses if any collateral received by Ihe Firm is insufficient to cover such losses. Ounng periods ol market stress or illiquidity. the Firm's credit risk also may be further increased when the Firm cannot realize the fair value of the collateral held by it or when collateral is liquidated at price: that are not sufficient to recover the lull amount of the loan, derivative or other exposure due to the Firm Further, disputes with obligors concerning the valuation of collateral could increase in

tunes of siijnilicani market s:iess. vo:,i;iluy o.' illiquiditv and tut; Firm comrt s-jlier losses during such periods M it is unable to realil!? the lair vaUi: ol collaiera- or manage ooclines in Hie value ol collateral Concentration of credit and market risk could increase the potential for significant losses JPMorgan Chase has exposure to increased levels o! risk when clients or count-roar ties are engaged m similar business activities or activities m the same geographic region, or when ihey have similar economic features that would cause their ahiluv to meet contractual obligations 10 be similarly allected by changes m econumic conditions i or example, a significant deterioration in the credit quality ol one ol the rirm's borrowers or counterparties could lead 10 concerns about the credit quality ol other borrowers or counterparties in similar related or dependent industries and thereby could exaceibate the Finn's credit nsk exposure and potentially increase its losses, including mark to-markct losses m its trading businesses Similarly, cnallengmg economic renditions affecting a particular industry or geographic area could lead 10 concerns about the credit qualu v ol (fie Firm's borrowers or counterpar ties, not only in lhat particular industry or geography but in related or dependent industries, wherever located, or about the ability of customers of thp Firm's consumer businesses living in such areas or working in such allected industries or related or dependent industries to meet their obligations to the Firm. Although the Firm regularly monitors various segments at us exposures to assess potential concentration or contagion risks. Hie Firm's efforts to diversity or hedge us exposures against concentration risks may not be successful.

In addition, disruptions in Ihe liquidity or transparency ol the financial markets may result in the Firm's inability to sell, syndicate or realize the value of us positions, thereby leading to increased concentrations. Ihe inability to reduce the Firm's positions may not only increase the market and credit risks associated with such positions, hut may also increase (he level of nsk-wcighled assets ("RWA") on the Firm's balance sheet, thereby increasing us capital requirements and funding costs, ail ol which could adversely affect the operations and profitability of (he Firm's businesses liquidity Risk

If JPMorgan Chase does not effectively manage its liquidity, its business could suffer JPMorgan Chase's liquidity is critical to its ahility to operate us businesses Some potential conditions that could impair Ihe Firm's liquidity include markets that become illiquid or are otherwise experiencing disruption, unforeseen cash or capital requirements (including, among others, commitments thai may be triggered to special purpose entities ("SPEs") or other entities), difficulty in selling or inability to sell assets, default by a CCP or other counterparty, unforeseen outflows of cash or collateral, and lack of market or customer confidence in the Firm or financial markets in general. These conditions may be caused by events over which the Firm has little oi no control The widespread crisis in investor confidence and

resnli.n" iifj'jidity crisis e>penenred m JOOR and .nto early 20QQ increased tne *irni s cost of funding and humeri us access tti some- ol i;s traditional sources ol liquidity (such as securitized debt oiler nigs backed bv mortgages oedr. card receivables and other assets) during thai time, and there is no assurance lhat these severe conditions could noi occui m the lulurc

il the Firm s access to stable and low cost sources of funding, such as bank deposits, is reduced, the Firm may need to raise alternative funding which may be more expensive or ot limited availability In addition, the Firm's cost ol lundiiig coultl be affected hy actions that the Firm may lake in order to satisfy applicable liquidity coverage ratio and net stable funding ratio requirements, to tower us GSIB systemic nsk score. 10 sanslv the amount of eligible LID that ttic firm must have outstanding under the TLAC rules, to address obligations under the Firm's Resolution Plan or to satisfy regulatory requirements in non-U.S jurisdictions relating to the pre-positionuig ol liquidity in subsidiaries that are material legal entities JPMorgan Chase is a holding company and depends on the cash flows ot ns subsidiaries to fund payments ot dividends on its equity securities, principal and interest payments on its debt securities and redemptions and repurchases of its outstanding securities. As a holding company, JPMorgan Chase & Co is dependent on the earnings o! us subsidiaries to meet Us payment obligations under the arrangements contemplated by (he Firm's Resolution Plan. JPMorgan Chase & Co has established a new intermediate holding company. JPMorgan Chase Moldings LLC (the 'IHC"), and has contributed to the IHC the stock of substantially all of its direct subsidiaries (other than JPMorgan Chase Bank. N A.) as well as other assets and intercompany indebtedness owing to il Under these arrangements. JPMorgan Chase & Co. is obligated lo contribute to (he IHC substantially all the net proceeds received by it Irom securities issuances (including, without limitation, issuances ol senior and subordinated debt securities and of pielerred and common stock) As a result ol these arrangements. JPMorgan Chase & Co's ability to pay interest on Us debt securities and dividends on its equity securities, to redeem or repurchase its outstanding securities and to fulfill its other payment obligations is dependent on it receiving dividends Irom JPMorgan Chase Bank. N A and dividends and extensions of credit from the IHC. JPMorgan Chase Bank, h a. is subject to restrictions on its dividend distributions, capital adequacy and liquidity coverage requirements, and other regulatory restrictions on us ability to make payments to JPMorgan Chase & Co.. and (he IHC is prohibited from paying dividends or extending credit to JPMorgan Chase & Co. if certain capital or liquidity "thresholds" are breached or if limits are otherwise imposed by the rirm's management or Board ol Directors These regulatory restrictions and limitations on the payments that JPMorgan Chase & Co. is permitted to receive Irom JPMorgan Chase Bank, N A and (he IHC could reduce or (under its ability to pay dividends and satisfy its debt and other obligations, or resull in JPMorgan Chase & Co. seeking protection under bankruptcy laws at a time earlier than

would have been the case absent the existence ot such thresholds.

Reductions in JPMorgan chase's credit ratings may adversely affect its liquidity and cost of funding, as well as the value of debt obligations issued by the Firm. JPMorgan Chase & Co and certain of its principal subsidiaries are currently rated by credit rating agencies Rating agencies evaluate both general and firm- and indu*»(ry-spccrfic factors when determining their credit ratings for a particular financial institution, including economic and geopolitical trends, regulatory developments, futur-e profitability, risk management prartir.es <http://prartir.es>, legal expenses, assumptions surrounding government support, and ratings differentials between bank holding companies and their bank and non-bank subsidiaries Although the Firm closely monitors and manages, to the extent il is able, factors that could influence its credit ratings, there is no assurance that the Firm's credit ratings will not be lowered in the future, or that any such downgrade would not occur at times of broader market instability when ihe rirm's options lor lesponding to events may be more limned and general investor confidence is low Furthermore, a reduction in the Firm's credit ratings could reduce the Firm's access to capital markets, materially increase the cost of issuing securities, trigger additional collateral or funding requirements, and decrease Ihe number of investors and counterparties willing or permitted, contractually or otherwise, to do business with or lend 10 the Firm, thereby curtailing Ihe Firm's business operations and reducing its profitability. In addition, any such reduction in credit ratings may increase Ihe credit spreads charged by the market for taking credit risk on JPMorgan Chase & Co. and us subsidiaries and. as a result, could adversely affect the value of debt and other obligations lhat JPMorgan Chase & Co and its subsidiaries havtr issued or may issue in the future Legal Risk

JPMorgan Chase faces significant legal risks, both from regulatory investigations and proceedings and from private actions brought against the Firm JPMorgan Chase is named as a defendant or is otherwise involved in various legal proceedings, including class actions and other litigation or disputes with third parties Actions currently pending against the Firm may result in judgments, settlements, lines, penalties oi other results adverse to the Firm, which could materially and adversely affect the Firm's business, financial condition or results ol operations, or cause serious harm to the Firm's reputation Asa participant in the financial services industry, it is likely thai the Firm will continue to experience a high level of litigation related to its businesses and operations, in addition, and as noted above, the Firm's businesses and operations are also subject to heightened regulatory oversight and scrutiny, which may lead to additional regulatory investigations or enforcement actions Regulators and other government agencies examine the operations of the Firm and us subsidiaries on both a routine- and targeted-cxam basis, and there is no assurance
that they will not pursue additional regulatory settlements or other enforcement actions against the Firm in the future A violation of law or regulation by another financial institution is likely to give rise to an investigation by regulators and other governmental agencies of the same or similar practices by the Firm. For example, various regulatory and governmental agencies have made inquiries to the Firm about us sales practices with retail customers, including, among other matters, the Firm's incentive compensation structures related to such practices in addition, a single event may give rise to numerous and overlapping investigations and proceedings, either by multiple federal and state agencies and officials in the U.S. or, in some instances, regulators and other governmental officials in non-U.s. jurisdictions. These and other initiatives from U.S and non-U-S governmental authorities and officials may subject the Firm to further judgments, settlements, fines or penalties, or cause the Firm to be required to restructure its operations and activities or to cease offering certain products or services, all of which could harm the Firm's reputation or lead to higher operational costs, thereby reducing the Firm's profitability, or result in collateral consequences as discussed above Other Business Risks

Any significant failure by the Firm's management to anticipate and respond quickly and appropriately to changes (n the Firm's operating environment or (rends affecting the Financial services Industry, to make prudent decisions regarding the Firm's strategy or to execute on that strategy could adversely affect the Firm's competitive standing and its earnings and future results of operations.

The Firm operates in many jurisdictions and offers a wide variety of products and services to its clients and customers The Firm's strategies concerning the products and services that il will offer, the geographies in which it will operate, the types of clients and customers that it will seive and the counterparties with which it will do business, and the methods and distribution channels by which it will offer its products and services, will all affect the Firm's competitive standing and us results of operations, if the rirm's management makes choices about the Firm's business strategies and goals that later prove to have been incorrect, does not accurately assess the competitive landscape and the industry trends affecting the Firm or does not formulate effective business plans to address the Firm's near- and longer-term strategic priorities, as well as the changing regulatory and market environments in which the Firm operates both in the U S and abroad, the franchise values and growth prospects ol the Firm's businesses will suffer and revenues will decline. The prospects ol the Firm will also depend on management's ability lo execute effectively against the Firm's strategic plans and to manage the Firm's resources to grow revenues, control expenses and return capital to the rirm's shareholders. Any significant failure by the Firm's Board of Directors lo exercise appropriate oversight of management's siratogic decisions, or any significant failure by the Fum's management to develop and execute on the Firm's strategic plans and business initiatives, or the mellectual

implementation of business decisions, the failure ol the Firm's products or services or dealings with customers to meet customer expectations, inadequate responses to regulatory requirements, the failure to react quickly to changes in market conditions oi structure, or the failure to develop the necessary operational, technology, risk, financial, and managerial resources necessary to grow and manage the Firm and Us various businesses could adversely affect the Firm's competitive standing and negatively affect the Firm's earnings and future results of operations JPMorgan Chase's operations are subject to risk of loss from unfavorable economic, monetary and political developments in the U.S. and around the world. JPMorgan Chase's businesses and earnings are affected by the fiscal and other policies that are adopted by various U.S and non-U.S. regulatory authorities and agencies The Federal Reserve regulates the supply of money and credit in the U.S and its policies determine in large part the cost ol funds for lending and investing in the U.S. and the return earned on those loans and investments Changes in rederal Reserve policies (as well as the fiscal and monetary policies ol non-U.S central banks or regulatory authorities and agencies, such as "pegging* the exchange rate of their currency to the currencies ol others) are beyond the rirm's control and may be difficult to predict, and consequently, unanticipated changes in these policies could have a negative impact on the Firm's activities and results of operations

The Firm's businesses and revenue are also subject to risks inherent in investing and market-making in securities, loans and other obligations of companies worldwide. These risks include, among others, negative effects Irom slowing growth rates or recessionary economic conditions, or the nsk of loss from unfavorable political, legal or other developments, including social or political instability, in the countries or regions in which such companies operate, as well as the other risks and considerations as described further below

Several ol the Firm's businesses engage in transactions with, or trade in obligations of. U S and non-u.S governmental entities, including national, stale, provincial, municipal and local authorities. These activities can expose the Firm to enhanced sovereign, credit-related, operational and reputation risks, including Ihe risks that a governmental entity may default on or restructure us obligations, claim that actions taken by govern men! officials were beyond (he legal authority of those officials or repudiate tiansactions authorized by a previous incumbent government, any or all ol which could adversely affect the Firm's financial condition and results of operations. Further, various countries or regions in winch the Firm operates or invests, or in which the nrm may do so in the future, have in the past experienced severe economic disruptions particular to those countries or regions. In some cases, concerns regarding the fiscal condition of one or moie countries can cause a contraction of available credit and reduced activity among trading partners or create market volatility that could lead 10 "market contagion" affecting other countries in the same region or beyond the

region, in addition, governments in particular countries or regions in which the Firm or its client do business may choose to adopt protectionist economic or trade policies in response to concerns about domestic economic conditions which could lead to diminished cross-border trade and financing activity n<thin that country or region, all of which could negatively affect the Firm's business and earnings in those jurisdictions.

Political and economic uncertainty can also undermine consumer, business and investor confidence, and thereby contribute to market volatility For example, uncertainties concerning the timing and terms of the U K.'s planned departure from the EU could have an adverse eflect on global financial markets and may adversely impact global economic conditions more generally. Furthermore, depending on the nature of the arrangements agreed between the U.K. and the EU, including with respect to the ability of financial services companies to engage in business in the FU from legal entities organized m or operating from the u K., it is possible that under some scenarios, the Firm may need to make changes to its legal entity structure and operations and the locations in which it operates, which might result in a less efficient operating model across the Firm's European legal entities. Accordingly, it is possible that political or economic developments in certain countries, even in countries in which the Firm does not conduct business or have operations or engages in only limited activities, may adversely aflect the Firm. The Firm must comply with economic sanctions and embargo programs administered by OFAC and similar multinational bodies and governmental agencies outside U.S., including, most recently, sanctions targeted at individuals and companies in Russia A violation ol a sanction or embargo program could subject ihe Firm, and individual employees, to regulatory enforcement actions as well as significant civil and criminal penalties JPMorgan Chase's operations in emerging markets may be hindered by local political, social and economic factors, and may be subject to additional compliance costs and risks.

Some of the countries in which JPMorgan chase conducts its businesses have economies or markets that are less developed and more volatile, and may have legal and regulatory regimes that are less established or predictable, than the u S and other developed markets in which the Firm currently operates Some of these countries have in ihe past experienced severe economic disruptions, including extreme currency fluctuations, high inflation, low or negative growth, or defaults or potential defaults on sovereign debt, among other negative conditions, or have imposed restrictive monetary policies such as currency exchange controls and other laws and restrictions that adversely affect the local and regional business environment, in addition, these countries, as well as certain more developed countries, have recently been more susceptible to unfavorable political, social or economic developments, these developments have in the past resulted in, and may in Ihe future lead to. social unrest.

Part I

ijenei Jl smkes anil JemonsiMlions crime anil corruption security ami peisonaf -..ifirlv issues, outbreaks a: tiostilmes overthrow of mci.mlient governments ttirionst attacks o: Oififci forms oi internal ilisrorrl at: of wmcd can adversely af'tcl ihr Firm s operations or investments m sucfi cniinines t'u 1 tica- 'oi.ial o" et-onoiriic disruption oi dil'ociiion in rvtari countries or regions in which the Finn cniiriiicts us!)(.:sineii an nmder tne growth and nroluabilily o' those Operations Less developed legal and legutaioiy systems m critam countries can also have adverse conserjuenrcs on the l irms operations m those i outlines including, among others, the absence of a staiiiioiy or regulatory basis oi guidance for engaging m specilir types of business or transactions, the promulgation of t on/Jirung or ambiguous laws ana regulations or the mconsisten; application or interpretation ot existing taws and regulations, uncertainty as to Hie enforceability ol contraciual obligations, difficulty in compeluig m economies in winch tne government controls or piotecis ar or a run liar of Ihe local economy or specific businesses, or where graft or corruption may be pervasive, and the threat of arbitrary regulatory investigations, owl litigations oi criminal prosecutions, the termination ol licenses returned lo operate m the local market or the suspension of business relationships with governmental bodies

Revenue from mteinational operations and trading in non-U S. securities and other obligations may he subject to negative lluctuatioiis k a result ol the above considerations, as wf ll as due to governmental actions including monetary policies, expropriation, nationalization, confiscation ot assets. p'ire conirois, capital controls, enhance cont'ols. and changes m laws and regulations The impact ol these fluctuations could be accentuated as some trading markets are smaller, less liquid and more volatile than largei markets Also, any of the above-mentioned events or circumstances in one country can allect and in tht; past conditions o< these types have allected, the Firm's operations and investments in another country or countries, including the Fnm's operations in the U S. As a result, any such unfavorable conditions or developments could have an adverse impact on the Firm's business and results of operations

Conducting business in rou nines with less developed legal and regulatory regimes often requires the Firm lo devole significant additional ipsouices to understanding, and monitoring changes in, local laws and regulations, as well as structuring its operations to comply with local laws and regulations and implementing and administering related internal policies and procedures Thcie can be no assurance thai the Firm will always be successful in us efforts to conduct its business in compliance with laws and regulations in countries with less predictable legal and regulatory systems or that the Firm will be able to develop c'lecttve working relationships with local regulators In addition, the Firm can also incur higher costs, and face greater compliance risks, m structuring and operating its husmesses outside the u S to comply with U.S anti-corruption and anti-money laundering laws and regulations.

JPMorgan Chase relics on the eltKtivencss and integrity of its processes, operational systems and employees, and those of third parties, and certain failures of such processes or systems, or errors or misconduct by such employees, could materially and adversely affect the Firm's operations.

Jf'Morgan Chase s bLsmeSSes art [1] dependent on the Firm s ability to process, record and monitor an increasingly large number of complex transactions and to do so on a faster and more frequent basis ihe Firms front- and hack-off ice trading systems similarly rely on then access to. and on the functionality ul the operational systems maintained by third parties such as clearing and payment systems central counterparties securities exchanges and data processing and technology companies Jf the Firm's financial, accounting, trading or other data processing systems, or ihe operational systems ol third parties on which the Firm s businesses are dependent, are unable to meet these increasingly demanding standards, or if they fail or have other significant shortcomings, the Finn could he materially and adversely affected Moreover, as Ihe speed, heouencv. volume and complexity ol transactions (and the requirements to report such transactions on a real-time basis to clients, regulators and financial intermediaries) increases, the nsk of human and/or systems error in connection with such transactions increases, and it becomes more challenging to maintain the rirm's operational systems and infrastructure The effective functioning ol the Firms operational systems is also dependent on (he competence and reliability of its employees, as well as the employees ol third parties on whom the Firm relies for technological support, and the Firm could be materially and adversely allected by a significant operational breakdown or failure caused by human error or misconduct by an employee of the Firm or a third party in addition, when the Firm changes processes or introduces new products and services or new connectivity solutions, the Firm may not fully appreciate or identify new operational risks thai may anse from such changes Any of these occurrences could diminish the rirm's ability to operate one or more of its businesses, or result in potential liability to clients and customers, increased operating expenses, higher litigation costs (including fines and sanctions), damage to reputation, impairment of liquidity, regulatory intervention or weaker competitive standing, any of which could materially and adversely all eel the Firm

Third parties with which the Firm does business, including retailers, data aggregators and other third parties wuh which the Firm's customers do business, can also be sources of operational risk to the Firm, particularly where activities ol customers or such third parties are beyond the Firm's security and contiol systems, such as through the use ol the internet, personal smart phones and other mobile devices or services. As the Firm's interconnectivity with customers and other third parties increases, the Firm increasingly faces the risk of operational failure with respect to their systems Security breaches affecting the Firm's customers, or systems breakdowns or failures, security breathes or human error or misconduct affecting such other third

parties, mav require the rum to take steps to protect the integriiv of US own operational systems or to safeguard confidential mlormation ol ihe TTm or us c ustomers thereby increasing tne Firm's operational costs and potentially diminishing customer satislariior. furthermore, the iriieicoiinectiviiy ol multiple financial instiiLi-ors wi:n central agents. e<chauges and clearing houses, and tne increased importance of these entities increases the risk that an operational laiiurc at one institution or enntv may cause an industry-wide operational failure ina; could materially impact the Firm s ability to conduct business The Firm's businesses are subject to complex and evolving US and non-US laws and regulations governing the privacy and protection of per so nal information of individuals (including clients, client's clients, employees of Ihe Firm and us suppliers and other thud parties) Fnsunng that the Firm's collection, use. transfer and storage of personal information complies with all applicable laws and (emulations, including where the laws ot different jurisdictions are in conflict, can increase Ihe Firm's operating cons, impact the development ol new products or services and require significant oversight by management, and may require the Firm to structure us businesses, operations and systems in less efficient ways Furthermore, the Firm mav not be able to ensure that all of us clients, suppliers, counterparties and other third parties have appropriate controls in place lo protect the confidentiality of (he information exchanged between (hem and the Firm, particularly where such infonnadon is transmitted hy electrons means tf personal, confidential or proprietary mlormation ol clients, customers employees or others were to be mishandled or misused (m situations where, for example, such information was erroneously provided to parties who are noi permuted to have the information, or where such information was intercepted or otherwise compromised by third parties), the Firm could be exposed to litigation or regulatory sanctions Contems regarding the effectiveness ol ihe Firm's measures to safeguard personal information, or even the perception that such measures are inadequate, could cause the Firm to lose customers or potential customers for its products and services and thereby reduce the Firm's revenues Accordingly, any failure or perceived failure by Ihe Firm to comply with applicable privacy or data protection laws and regulations may subiect it to inquiries, examinations and investigations lhat could result in requirements to modify or cease certain operations or practices or significant liabilities, fines or penalties, and could damage the rirm's reputation and otherwise adversely affect its businesses The Firm may be subject to disruptions of its operational systems arising from events that are wholly or partially beyond the Firm's control, which may include, lor example, security breaches (as discussed further below), electrical or telecommunications outages, failures of computer servers or other damage to the Firm's property or assets, natural disasters or severe weather conditions, health emergencies or pandemics, or events arising from local or largpr-scale political events, including outbreaks of hostilities or terrorist acts JPMorgan Chase maintains a global resiliency and crisis management program that is intended to ensure

that tne Firm nas the ability to recover us nmcal business functions and supporting assets including stall, technology and facilities, in the event ol a business interruption while the i irm believes thai us current resiliency plans are hoth sufficient and adeouate. there can be no assurance ihat such plans will fully mitigate all potential business ujnimj.lv <http://ujnimj.lv> nsk: 10 ihe Firm or us customers and clients Anv failures or d.'srujtficws of Mie ʳ-nw's sysiems or oppij.Mjns rould give rise to losses in service lo customers and clients adversely affect Hie Firm's business and results of operations by subjecting tne Firm tn losses or liability, or require the Firm to expend significant resources lo correct the failure or disruption, as well as by exposing the Firm to litigation, regulatory fines or penalties or losses noi covered by insurance

A breach in the security of JPMorgan Chase's systems, or those of other market participants, could disrupt the Firm's businesses, result in the disclosure of confidential information, damage the Firm's reputation and create significant financial and legal exposure for the Firm. Although iPunrgan Case devotes significant resources id maintain and regularly upgrade us systems and processes that are designed to protect the security ol ihe Firm's computer systems, software, networks and other technology assets, as well as the confidentiality, integrity and availability of information belonging to the Firm and us customers and clienti. there is no assurance that all ot the Firm's secunty measures will provide absolute security JPMorgan Chase and other companies, as well as governmental and political organizations, have reported significant breaches in Ihe security of their websites, networks or other systems, some ol which have involved sophisticated and targeted attacks intended to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage, including through the introduction of computer viruses or malware. cyberatiacks and other means. The Firm is regularly targeted by unauthorized parties using malicious code and viruses, and has experienced several significant distributed denial-of-service attacks from technically sophisticated and well-resourced third parties which were intended to disrupt online banking services

Despite the rirm's efforts to ensure the security and integrity of us systems, it is possible thai the Firm may not be able to anticipate, detect or recognize threats to its systems or to implement effective preventive measures against all security breaches of these types inside or outside the Finn, especially because the techniques used change frequently or are not recognized until launched, and because cyberattacks can originate from a wide variety of sources, including third parlies who are or may be involved in organized crime or linked to terrorist organizations or hostile foreign governments, and such third parties mav seek to gam access to the Firm's systems either directly or using equipment or security passwords belonging to employees, customers, third-party service providers or other users of the Firm's systems These risks may increase in the future as the Firm continues to increase us mobile-payment and other internet-based product offerings and

expands its internal usage of web-based products and applications

Giwn (he breadth of the Firm's operations, the high volume ol transactions that u processes, the large number of customers, counterparties and third-party service providers with which the Firm docs business, and Ihe proliferation and increasing sophistication of cyberattacks. a particular cyberattack could occur and persist for an extended period of time before being detected The extent ot a particular cyberattack and the steps that the Firm may need to take to investigate (he attack may not be immediately clear, and it may take a significant amount of time before such an investigation could be completed and full and reliable information about Ihe attack is known. During such time the Firm may noi necessarily know the extent of the harm or how best lo remediate il, and certain errors or actions could be repeated or compounded before they are discovered and remediated, any or all of which could further increase the costs and consequences of a cyberattack A successful penetration or circumvention of the security of the Firm's systems or the systems ol another market participant could cause serious negative consequences for the Firm, including significant disruption ol the Firm's operations and those ot its clients. Customers and counterparties, misappropriation ol confidential information of the Firm or thai of its clients, customers, counterparties or employees, or damage to computers or systems of the Firm and those of Us clients, customers and counterparties, and could result in violations of applicable privacy and other laws, financial loss to the Firm or to us customers, loss of confidence m the Firm's security measures, customer dissatisfaction, significant litigation exposure and harm to the Firm's reputation, all of which could have a material adverse effect on the nrm Risk Management

JPMorgan Chase's framework for managing risks and its risk management procedures and practices may not be effective in identifying and mitigating every risk to the Firm, thereby resulting in losses. JPMorgan Chase's nsk management framework seeks to mitigate risk and loss to the Firm The Firm has established processes and procedures intended to identify, measuie. monitor, report and analyze the types of risk to which the Firm is subject However, as with any risk management framework, there arc inherent limitations to the Firm's risk management strategies because there may exist, or develop in the future, risks that the Firm has not appropriately anticipated or identified In addition, the Firm relies on data to aggiegate and assess its various risk exposures, and any deficiencies in the quality or effectiveness ol the Firm's data aggregation and validation procedures could result in ineffective risk management practices or inaccurate risk reoorting. Any lapse in the Firm's risk management framework and governance structure or other inadequacies in the design or implementation ol ihe Firm's nsk management framework, governance, procedures, practices, models or risk reporting systems could, individually or in the aggregate, cause unexpected losses for the Firm, materially and adversely affect the Firm's financial condition and results of operations, require significant resources to remediate any risk management deficiency, attract heightened regulatory scrutiny, expose the Firm to regulatory investigations or legal proceedings, subject the Firm to fines, penalties or judgments, harm the Firm's reputation, or otherwise cause a decline m investor confidence.

The Firm establishes allowances for probable credit losses inherent in us Credit exposures, and also employs stress testing and other techniques to determine the capital and liquidity necessary to protect the Firm in [he event of adverse economic or market events. These processes are critical to the Firm's financial results and condition, and require difficult, subjective and complex judgments, including forecasts of how economic conditions might impair the ability of the Firm's borrowers and counterparties lo repay their loans or other obligations As is the case with any such assessments, there is always the possibility that the Firm will fail to identify the proper factors or that the Firm will fail to accurately estimate the impact of factors that it identities Certain of the Firm's trading transactions require the physical settlement by delivery ol securities or other obligations that the Firm does not own, it the Firm is unable to obtain such securities or obligations within the required timeframe for delivery, this could cause the Firm to forfeit, payments otherwise due to it and could result in settlement delays, which could damage the Firm's reputation and ability to transact future business in addition, in situations where trades are not settled or confirmed on a timely basis, the rirm maybe subject to heightened credit and operational risk, and rn the event of a default, the Firm may be exposed to market and operational losses Many of the Firm's risk management strategies or techniques have a basis in historical market behavior, and all such strategies and techniques are based to some degree on management's subjective judgment For example, many models used by the Firm are based on assumptions regarding correlations among prices of various asset classes or other market indicators, in times of market stress, including difficult or less liquid market environments, or in the event of other unforeseen circumstances, previously uncorrected indicators may become correlated, or conversely, previously correlated indicators may make unrelated movements. These sudden market movements or unanticipated or unidentified market or economic movements have in some circumstances limited and could again limit the effectiveness ol the Firm's nsk management strategies, causing the Firm to incur losses. Many of the models used by the rirm are subject to review not only by Ihe Firm's Model Risk function but also by the Firm's regulators in order that Ihe Firm may utilize such models in connection with the Firm's calculations of market nsk RWA, credit risk RWA and opeianonal risk RWA under Basel in The Firm may be suhjed 10 higher capital charges, which could adversely aflect us financial results or limit us ability to expand its businesses, if such models do not receive approval by its regulators.

in addition, the Firm must comply with enhanced standards for the assessment and management of risks associated with vendors and other third parties thai provide services to the Firm. These requirements apply to the Firm both under general guidance issued by its banking regulators and. more specifically, under certain of the consent orders to which the Firm has been subject. The Firm has incurred and expects to incur additional costs and expenses in connection with its initiatives to address the risks associated with oversight of its third party relationships. Failure by (he Firm to appropriately assess and manage third party relationships, especially those involving significant hanking functions, shared services or other critical activities, could result in potential liability to clients and customers, fines, penalties or judgments imposed by the Firm's regulators, increased operating expenses and harm lo the Firm's reputation, any of which could materially and adversely aflect the Firm Other Risks

Actions or Inaction by employees of the Firm may cause harm to the Firm's clients and customers, damage the Finn's reputation, negatively Impact the Firm's culture and lead to liability and regulatory and other governmental actions against the Firm. JPMorgan Chase's employees interact with clients, customers and counterparties every day, and they are expected through their conduct 10 demonstrate the Firm's values and exhibit the culture and behaviors that are an integral part of the Firm's How we Do Business Principles, including the rirm's commitment to 'do firs! class business tn a first class way" tf an employee takes an action (including a failure to act) that does not comply with the Firm's Code of Conduct, is inconsistent with the Firm's How We Do Business Principles or that otherwise harms clients, consumers or the market, such as improperly selling and marketing the Firm's product or services, acting illegally with others to establish market pnees, improperly hiring individuals related to "politically exposed persons" or misappropriating Firm property or confidential or proprietary information or technology belonging lo (he Finn, us customers or third parties, such activities could give rise to litigation, regulatory or other governmental investigations or enforcement actions, and judgments, settlements, fines or penalties, and lead lo requirements that the Firm restructure certain of its operations and activities, all of which could harm the Firm's reputation or result in collateral consequences Although the Firm endeavors to embed culture and conduct risk management ■ throughout an employee's lite cycle, including recruiting, onboarding, training and development, and performance management, as well as through the Firm's promotion and compensation processes, employees ol the Firm have, from time to time in the past, engaged in improper or illegal conduct resulting in litigation as well as settlements involving consent orders, deferred prosecution agreements and non-proseculion agreements, as well as other civil and criminal settlements with regulators and other governmental entities, and there is no assurance that further inappropriate actions by employees will not occur or

that any such actions will always be deterred or quickly prevented

The financial services industry is highly competitive, and JPMorgan Chase's Inability to compete successfully may adversely affect its results of operations.

JPMorgan Chase operates in a highly competitive environment, and the Firm expects that competition in the U S. and global financial services industry will continue to be intense Competitors of the Firm include other banks and financial institutions, trading, advisory and investment management firms, finance companies and technology companies and other firms that are engaged in providing similar products and services. Technological advances and the growth of e-commerce have made it possible for non-deposilory institutions to offer products and services that traditionally were banking products, and for financial institutions and other companies to provide electronic and internet-based financial solutions, including electronic securities trading, payment processing and online automated algorithmic-based investment advice. New technologies have required and could require the Firm to spend more to modify or adapt its products to attract and retain customers or to match products and services offered by its competitors, including technology companies. Ongoing or increased competition, on the basis of the quality and variety of products and services offered, transaction execution, innovation, reputation, price or oiller factors, may put downward pressure on prices and Tees for the Firm's products and services or may cause the Firm to lose market share In addition, the failure of any of the Firm's businesses to meet the expectations of clients and customers, whether due to general market conditions or underperformance (relative to competitors or to benchmarks), could impact the rirm's ability to retain clients and customers or attract new clients and customers, thereby reducing the Firm's revenues Increased competition also may require ihe Firm to make additional capital investments in its businesses, or to extend more of us capital on behalf of its clients in order to remain competitive. The Firm cannot provide assurance lhat the significant competition in the financial services industry will noi materially and adversely affect its future results of operations

Non-u.S competitors of ihe Firm's wholesale businesses outside the U.S are typically subject to different, and in some cases, less stringent, legislative and regulatory regimes. The more restrictive laws and regulations applicable to U S. financial services institutions, such as JPMorgan Chase, can put the Turn at a competitive disadvantage to us non-U 5 competitors, including prohibiting the Firm from engaging in certain transactions, imposing higher capital and liquidity requirements on the nrm, making the Firm's pricing of certain transactions more expensive for clients or adversely allectmg the Firm's cost structure lor providing certain products, all ol which can reduce ihe revenue and profitability ot the Firm's wholesale businesses.

Part i

JPMoigan Chase's ability to attract and retain qualified employees « crir.fc.jf <http://crir.fc.jf> to its success Il'Mui(.nase s employees are iiu>[1] urn's mosi i:npy;Mnt resource anil in many areas ot in* financial services industry conipeiiiinii ior qualified pcsoiinel is intense The rum enueavms to diuar/Malemed and diverse new employees and re;ain and motivate its existing empluvees There is th? potential lor changes in immigration policies m multiple jurisdictions around Die woiid. including the U S . and to the extent mat imnngianon policies were to unduly restnc i or otherwise make it more difficult for qualified employees to work in. or transit' among, jurisdictions m wtiiiii trie Firm lias operations, oi conducts its business, the nrm couNI he adversely affected ihe Firm also seeks to ieiam a pipeline o! senior employees wun superior talent, augmented trom lime to time by external hires, to provide continuity ol succession fo< the Firm's Operating Committee, including ihe Cluef Executive Olhcer posmon and senior positions below the Operating Committee The Firm regularly reviews randiciates lor senior management positions to assess whether thev currently are leady lor a next'leve! ioie m addition, the rum's Board of Directors is deeply involved in succession planning, including ieview of the succession plans for the Chief Executive Officer and the members of the Operating Committee il the Firm weie unable to continue 10 attract or retain qualified employees, including sucressors to the Chiel Executive Ollicor or members of the Operating Committee, the Firm's pertormance. including its competitive position, could be materially and adversely affected JPMorgan Chase's financial statements arc based in part on estimates and judgments which, if incorrect, could result in unexpected losses in the future. Unaer at counting principles generally airepted m the U 5 CU 5 GAAP"). JPMorgan Chase is required to use estimates ana apply judgments m preparing its financial statements, including in determining allowances for credit losses and reserves related to litigation, among other items Certain ol the Firm's financial instruments, including trading assets anci liabilities, instruments m the investment securities portfolio certain loans MSRs. structured notes and certain repurchase and resale agreements, among other items, require a determination ol their lau value in order to prepare the Firm's financial statements Where quoted market prices are noi available, the Firm may make lair value determinations based on internally developed models or tuhcr means which ultimately rely to some degree on management estimates and judgment in addition, sudden illiquidity in markets or declines m prices of certain loans ana securities may make it more difficult to value certain balance sheet items, which may lead to the possibility that such valuations will be subject to lurther change or adjustment, il estimates or judgments underlying the Firm's financial statements are incorrect, the Firm may experience material losses

Lapses m disclosure controls and procedures or internal control over financial reporting could materially and adversely affect the Fum's operations, piulitability or reputation

There can be no assurance that the Firms disclosure controls and procedures will be eflective m every circumstance or that a material weakness or significant deficiency in internal coniiol over financial reporting will not occur Any such lapses or deficiencies may materially and adversely affect the Firm s business and results ol operations or financial condition, restrict us ability to access the capital markets require the Firm 10 expend significant resources to correct the lapses or deliciencies. expose the Firm to regulatory or legal proceedings, subject it to fines, penalties or judgments, harm Ihe Firm's reputation, or otherwise cause a decline in investor confidence

Damage to JPMorgan Chase's reputation could damage its businesses.

Maintaining trust in JPMorgan Chase is critical to the Firm's ability to attract and maintain customers, investors and employees Damage to ihe rirm's reputation can therefore cause significant harm to the Firm's business and prospects Harm to the Firm's reputation tan ansc from numerous sources, including, among others, employee misconduct, security breaches, compliance failures, litigation or regulatory outcomes or governmental investigations The Tirm's reputation could also be harmed by the failure or perceived failure of an affiliate, |omt-veniurei or merchant banking portfolio company, or a vendor or other thud party with which the Firm does business, to comply with laws or regulations In addition, the Firm's reputation or prospects may be significantly damaged by adverse publicity or negative information regarding Ihe Firm, whether or not true, that may be posted on social media, non-mainstream news services or other parts of the internet, and this risk can be magnified by the speed and pervasiveness with which information is disseminated through those channels

Management of potential conflicts of interest has become increasingly complex as the Fum continues to expand its business activities through more numerous transactions, obligations and interests with and among the Firm's clients The failure or perceived failure to adequately address or appropriately disclose conflicts of interest has given rise to litigation and enforcement actions Likewise, the failure or perceived failure to deliver appropriate standards of service and quality, to treat customers and clients fairly, to provide fiduciary products or services in accordance with the applicable legal and regulatory standards, or to handle or use confidential information of customers or clients appropriately or in compliance with applicable data protection and privacy laws and regulations has given rise to litigation and enforcement actions In the future, a failure or perceived failure to appropriately address conflicts or Fiduciary obligations could result in customer dissatisfaction, litigation and heightened regulatory scrutiny and enforcement actions, all of which can lead to lost

revenue and higher operating costs and cause serious harm to the Firm s reputation

Actions by Hie financial \eivices industry generally or hv curiam members ut or individual in ;ne industry can also atleci me Firm s reputation For example, the role played by Imancial services linns during and after the financial crisis including concerns thai consumers have been ncaied unfairly by financial institutions or thai a financial institution had acted inappropriately with respect to the methods employed m offering products 10 customers, have damaged the reputation of the industry as a whole Should any ot these or other events or factors that can undermine the Finn's reputation on in. thcie is no assurance mat (he additional costs and eipenses ;hat the ru rn may need io mcui io address the issues giving rise to the damage to its reputation could not adversely affect Ihe Firm's earnings and results of operations, or that damage to Ihe Firm's reputation will not impair the Firm's ability to retain its existing or attract new customers, investors and employees

Item IB Unresolved Staff Comments

Item 2. Properties.

JPMorgan Chase s headquarters is located in Mew York City at 270 Park Avenue, a 50-story office building it owns The Firm owned or leased facilities in the following locations at December 31 2016

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Total Aila Pacific. Latin America and Canada

The premises and facilities occupied by JPMorgan Chase are used across all of Ihe Firm's business segments and tor corporate purposes. JPMorgan Chase continues to evaluate its current and projected space requirements and may determine from time to time lhat certain of its properties (including the premises and facilities noted above) are no longer necessary (or its operations There is no assurance that the Firm will be able to dispose ol any such excess properties, premises, and facilities or that it will not incur charges in connection wilh such dispositions Such disposition costs may be material to the Firm's results of operations in a given period Tor information on occupancy expense, see the Consolidated Results of Operations on pages 40-42

item 3. Legal Proceedings.

For a description of the rirm's material legal proceedings, see Note 31

Item A. Mine Safety Disclosures. Not applicable.

Part ll

Item 6. Selected Financial Daia.

For five-year selected financial data, see "five-year summary of consolidated financial highlights (unaudited)" on page 34

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Management's discussion and analysis of financial condition and results of operations, entitled "Management's discussion and analysis," appears on pages 36-138. Such information should be read in conjunction with the Consolidated Financial Statements and Notes thereto, which appear on pages 141-271.

For information on the common dividend payout ratio, see Capital actions in the Capital Risk Management section of Management's discussion and analysis on page 84. For a discussion of restrictions on dividend payments, see Note 22 and Note 27 On January 31, 2017, there were 196,792 holders of record of JPMorgan Chase common stock For information regarding securities authorized for issuance under the Firm's employee stock-based compensation plans, see Part 111, Item 12 on page 25.

Repurchases under the common equity repurchase program

For information regarding repurchases under the Firm's common equity repurchase program, see Capital actions in the Capital Risk Management section of Management's discussion and analysis on page 84

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billion repurchase prorjram was authorized by the

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

For a discussion of the quantitative and qualitative disclosures about market risk, see the Market Risk Management section of Management's discussion and analysis on pages 116-123

item 8. Financial Statements and Supplementary Data.

The Consolidated Financial Statements, together with the Notes thereto and the report thereon dated February 28. 2017, of PrtcewaterhouseCoopers LLP, the Firm's independent registered public accounting firm, appear on pages 140-271

Supplementary financial data for each full quarter within the two years ended December 31,2016, are included on pages 272-273 in ihe table entitled "Selected quarterly financial data (unaudited)." Also included is a "Glossary of terms and Acronyms" on pages 2 79-285.

item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

Item 9A. Controls and Procedures The internal control framework promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), "Internal Control Integrated Framework" ("COSO 2013") provides guidance lor designing, implementing and conducting interna) ronlro! and assessing its effectiveness. The Firm used the COSO 2013 framework to assess the effectiveness of the Firm's internal control over financial reporting as of December 31, 2016 See "Management's report on internal control over financial reporting" on page 139 As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of us disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) Based on thai evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. See exhibits 31.1 and 31.2 for the Certification statements issued by the Chairman and Chiel Executive Officer and Chief Financial Officer.

The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of us inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, in a firm as large and complex as JPMorgan Chase, lapses or deficiencies in internal controls may occur from time to time, and there can be no assurance lhai any such deficiencies will noi result in significant deficiencies or material weaknesses in internal control in the future For further information, see "Management's report on internal control over financial reporting" on page 139. There was no change m the Firm's internal control over Financial reporting (as defined in Rule 13a-15(f) under (he Securities Exchange Act of 1934) that occurred during the three months ended December 31, 2016, that has materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

(tern 96. Other information. None

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Part in

Hen-. 10 Directors Executive Officers .md Corporate Governance

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Executive officers of the registrant
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Chairman o> the Boaid chici Ixecutive Officer nnd Piesideni Chief kisk OHiter since June 2013 He had :*>(>n Deputy (hie! Risk oil iter mice June ?0l 2 prior lo which he had been Gmhal Head of Market Risk lor the invesunem (t,ink (now part of Corporate fi investment Bank)

Head ot Human Resources.

Chid t.xccuuve Officer ol Asset S wealth Management

Marianne Lake Douglas tl Petno

Gcnpiai Counsel since January 1. 20 lb. unnr to which snp wai ncpuiy Gcne-al Counsel since July ?01S and Gene;.11 Counsel for the Corporate ft invesiment Rank smcc August 2012 Prior loicxnuig IPUorgan Chase in 2012, she was a partner ai tnp l,iw firm ol Sullivan A f.rumwell LLP

Chiel Eiw.utwe OllKei of Commercial Banking since January 2012 He nad been chief Operating Ofhcer of Commercial Banking since October 2010. prior to which he had been Global Head of Natural Resources in the Investment Bank (now pan o' Corporate & Investment Bank)

Chic' Lxecubve Officer ot the Corporate & Investment Bank since March 2014 and Lhiet Fxpcufive OMicer ot Europe, the Middle Last and Africa since June 2011 He had been Co-(.fucr t'xei utive Officer of the Corporatr ft investmem Rankiiom July 201.? until March 2014. prior to which he had been head orco-npari of the Global fixed income business from November 2009 unlit July 2012

("jordon a Smith

Chie! Executive Ofhcer of Consumer & Community Banking sincr December 2012. prior to which he had been Co-Chief Lxecutive Olticer since July 2012. He had been Chief Executive officer of card Services since 2007 and ol the Auio Finance and Student Lending businesses since 2011

Chiel Operating Officer since April *0l 3 and head of Mortgage Banking Capital ua'kets smce January 2012 He had been Co'Cruel Operating officer from July 2012 until Apt it 2013. He had been Chiel Inveslment Officer Irom May until September 2012, co-head of the Global Fixed income business from November 2009 until May 2012 and co-head of Mortgage Banking Capital Markets hum July 2011 unlit January 2012 piioi 10 which he had served in a nunihci of senior Investment [linking rixeri income management roles

Item ll Executive Compensation

See Hem 10

item] 2 Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Foi security ownership of ceitiiin beneficial owneis and management, see item 10

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The following tahle sets lorth ihe losal numhei ol shaies available lor issuance under JPMorgan Chases employee stock-based incentive plans (including shaies available for issuance io non-employee directors) The rum is not authorized io grant stock' based incentive awards to non-employees, other than to non-employee directors

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All future shares will be issued under the shareholder-approved LTif For further discussion, see Note 10

Item) 3. Certain Relationships and Related Transactions, and Director independence.

See Item 10

item 14 Principal Accounting Fees and Services See Item 10

Unless otherwise noted, dunng the five fiscal years ended December 31. 2016. all of JPMorgan Chase's above-named executive officers have continuously held senior-level positions with JPMorgan Chase There are no family relationships among the loregoing executive officers. Information to be provided m Items 10.11.12.13 and 14 ol the Form 10-K and not otherwise included herein <s incorporated by reference to the Firm's Definitive Proxy Statement for its 2017 Annual Meeting of Stockholders to be held on May 16. ?0l7, which will be tiled with the SEC within 120 days of the end oi the Firm's fiscal year ended December 31. 2016

item 15. Exhibits, Financial Statement Schedules.

1 Financial statements

ihe Consolidated Financial Statements, the Notes thereto and the report of the independent Registered Public Accounting \ nrm thereon listed in item 8 are set forth commencing on page) 40.

2 rmancial statement schedules

3 Exhibits

1 Restated Certificate ot Incorporation of JPMorgan Chase ft Co.. effective April 5, 2006 (incorporated by reference to Exhibit 3 1 to the Current Report on rorm 8-K ol JPMorgan Chase ft Co. (File No 1-5805) filed April 7, 2006)

2 Amendment to the Restated Cerlilicate of incoiporation of JPMorgan Chase ft Co . effective June 7. 2013 (incorporated by reference to Appendix f lo the Proxy Statement on Schedule 14A of JPMorgan Chase ft Co (Fife No. 1-5605) filed April io. 2013)

4 3 Certificate of Designations for Fixed-to-
f loating Rate Non-Cumulative Preferred Stock, Series I (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K of JPMorgan Chase S Co. (File No 1-5605) filed April 24, 2008)

i 4 Certificate of Designations for 5 50% Non-
Cumulative Preferred Stock, Series 0 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase ft Co. (Fife No 1-5805) hied August 2 7. 2012)

3 5 Certificate of Designations for 5 45% Non-Cumulative Preferred Stock, Series P (incorporated by reference lo Exhibit 3 1 lo Ihe Current flepoit on Form fl-K of JPMorgan Chase ft Co (File No 1-5805) filed rebruary 5,2013).

3.6 Certificate ol Designations for Fixert-to-rioatmg Rate Non-Cumulalive Preferred Stock, Series 0 (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K of JPMorgan Chase ft Co. (File No 1 -5805) filed April 23. 2013)

3 7 Certificate of Designations for Fined-to-Floating Rate Non-Cumulative Preferred Stock, Series R (incorporated by reference to Exhibit 3 I to the Current Report on Form 8-K of JPMorgan Chase ft Co (File No. 1-5805) filed July 29. 2013)

8 Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock. Series S (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K of JPMorgan Chase ft Co. (File No 1-5805) filed January 22. 20141.

9 Certificate of Designations for 6 70% Non-Cumulative Preferred Stock. Series T (incorporated by reference to Exhibit 3 1 to Ihe Current Report on Form 8-K of JPMorgan Chase ft Co. (File No. 1 -5805) filed January 30. 2014)

3 10 Certificate of Designations lor Fixed-to-Floating Rate Non-Cumulative Preferred Stock. Series U (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K ol JPMorgan Chase ft Co. (File No. 1-S805) filed on March J0, 2014)

3 1] Certificate ot Designations tor Fixed-tenoning Rate Non-Cumulative Preferred Stock. Series V (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K of JPMorgan Chase ft Co. (File No. 1-5805) filed on June 9,201 A).

3 12 Certificate of Designations for 6 30% Non-Cumulative Preferred Stock. Series W (incorporated by reference io Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase ft Co (File no. 1-5805) filed on June ?3. 2014)

13 Certificate of Designations tor Fixed-to-Floating Rale Non-Cumulative Preferred Stock, Series X (incorporated by reference to exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase ft Co (File No. 1-5805) filed on September 23. 2014).

14 Certificate of Designations for 6 125% Non-Cumulaiive Preferred Stock. Series Y (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K of JPMorgan Chase ft Co (rile No 1-5805) filed Fehruary 17,2015)

15 Certificate of Designations tor Fixed-to-FloaluiQ Rate Non-Cumulative Preferred Stock. Series 2 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase ft Co. (File No 1-5805) filed April 21.2015)

16 Certificate of Designations for 6 10% Non-Cumulative Preferred Stock, Senes AA (incorporated by reference to Exhibit 3 1 lo the Current Report on Form 8-K of JPMorgan Chase ft Co (File No 1-5805) hied June 4. 2015)

3 17 Certificate of Designations for 6 15% Non-Cumulative Preferred Stock. Series BB (incorporated by reference to Exhibit 3 1 to the Current Report on Form 8-K of JPMorgan Chase & Co (File No 1-5805) filed July 29. 2015).

3.18 By-laws of JPMorgan Chase ft Co., effective January 19,2016 (incorporated by refeience to Exhibit 3 1 to the Current Report on Form B-K of JPMorgan Chase ft Co (File No. 1-5805) filed January 21. 2016)

4.1(a) indenture, dated as of October 21, 2010. between JPMorgan Chase ft Co and Deutsche Bank Trust Company Americas, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K ol JPMorgan ChaseftCo (File No 1-5805) filed October 21. 2010)

4.1 (b) First Supplemental indenture, dated as of January 13.2017. between JPMorgan Chase & Co and Deutsche Bank Trust Company Americas, as Trustee, to the indenture, dated as of October 21. 2010 (incorporated by reference to Exhibit 4 I to the Current Report on Form 8-K of JPMorgan Chase ft Co (File No 1-S805) filed January 13. 2017)

4 2(a) Subordinated Indenture, dated as of March 14, 2014, between JPMorgan Chase ft Co. and U S Bank Trust National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of JPMorgan Chase & Co (File No 1-S805) filed March 14. 2014)

4 2(b) First Supplemental indenture, dated as of January 13, 2017, between JPMorgan Chase ft Co and U.S Dank Trust National Association, as Trustee, to the Subordinated indenture, dated as of March 14, 2014 (incorporated by reference lo Exhibit 4.2 to the Current Report on Form 8-K of JPMorgan Chase ft Co. (File No 1-5805) filed January 13. 2017).

4 3(a) indenture, dated as of May 25, 2001, between JPMorgan Chase ft Co and Bankers Trust Company (succeeded by Deutsche Bank Trust Company Americas), as trustee (incorporated by reference to Exhibit 4(a)(1) to the Registration Statement on rorm S-3 of JPMorgan Chase ft Co. (File No 333-52826) tiled June 13, 2001).

4 3(h) Sixth Supplemental indenture, dated as of January 13, 2017, between JPMorgan Chase A Co and Bankers Trust Company (succeeded by Deutsche Bank Trust Company Americas), as Trustee, to (he indenture, dated as of May 25, 2001 (incorporated by reference to Exhibit 4 3 to the Current Report on Form g-Kof JPMorgan Chase ft Co (File No 1-5805) filed January 13. 2017)

4 4 Indenture, dated asof February 19, 2016, among JPMorgan Chase Financial Company LLC. JPMorgan Chase ft Co and Deutsche Bank Trust Company Americas, as Trustee (incorporated by reference to Exhibit 4(a)(7) to the Registration Statement on Form S-3 ol JPMorgan Chase & Co. and JPMorgan Chase Financial Company LLC (rile No 333-209682) filed February 74. 2016)

4.5 Form of Deposit Agreement (incorporated by reference to exhibit 4 3 to the Registration Statement on Form S-3 of JPMorgan Chase ft Co. (File No 333-191692} filed October ll. 2013)

4 6 Form of Warrant to purchase common stock .(incorporated by reference to Exhibit 4.2 to the Form 8-A of JPMorgan chase ft Co. (File No 1-5805) filed December! 1.2009)

Other instruments defining the rights of holders of long-term debt securities ofJPMorgan chase & Co. and its subsidiaries are omitted pursuant to Section (b}<4)\in)(s.) of Item 601 of Regulation S-K JPMorgan Chase ft Co. agrees to furnish copies of these instruments to the SEC upon request.

10.1 Deterred Compensation Plan for Non-Employee Directors of JPMorgan Chase A Co.. as amended and restated July 2001 and as of December 31, 2004 (incorporated by reference to Exhibit 10 I to the Annual Report on Form 10-K of JPMorgan Chase ft Co (File No 1-5805) for the year ended December 31, 2007 J.'"

10 2 2005 Deferred Compensation Plan lor Non-Emproycc Directors or JPMorgan Chase ft Co, effective as of January l. 2005 (incorporated by reference to Exhibit 10.2 to the Annual Report on Form 10-K of JPMorgan Chase ft Co. (File NO. 1-5805} for the year ended December 31, 2007)[w]

J 0 3 2005 Deferred Compensation Program of JPMorgan Chase & Co , restated effective as of December 31.2008 (incorporated by reference to Exhibit 10 4 to Ihe Annual Report on Form 10-K of JPMorgan Chase ft Co. (File No 1-5805) for the year ended December 31, 2008).[tu]

10 4 JPMorgan Chase & Co. Long-Term Incentive Plan as amended and restated effective May 19, 2015 (incorporated by reference to Appendix C of the Schedule 14A of JPMorgan Chase ft Co (File No 1-5805) filed April 8. **2015).'"**

5 Key Executive Performance Plan of JPMorgan Chase ft Co , as amended and restated effective January 1,2014 (incorporated by reference to Appendix G of the Schedule 14A of JPMorgan Chase ft Co. (File no 1-5805) filed April 10. 2013) [w]

6 Excess Retirement Plan of JPMorgan Chase ft Co., restated and amended as of December 31. 2008. as amended (incorporated by reference to Exhibit 10 7 to the Annual Report on Form 10-K of JPMorgan Chase ft Co. (File *No 1-S805) lor the year ended December 31: 2009)*

10 7 i 9<>5 stod incentive :i.m of) ° Morgan & to ■:>cnrpora:ert aim Alhliaied Companies as amended daiod Decembei n.l096 lmcoi poratec! nv reference io r nhou ! 0 8 io ihe Annual Report on Form 10-K o! JPMurgan Chase A to f' il? No]-5805) lw in? year ended Dei ember 31 200SJ[∴]

10 B F.-ecuuve Retirement Plan ol JPMorgan cnase A Co Ai amended anil restated December 31. ;*00S dnrorpoMieri by referent? io ExhiDil in? to the Annual Report on Form 10 K ol i'*M:)ii;an Chase A Co (File No 1-5805) lor me year ended December 31. 2008)[1,1]

10 9 Bank One Corporation Stock Perlormance Plan as amended and restated effective February .?0. 2001 (incorporated by reference to Exhibit 10 12 to tne Annual Report on Form 10'K of fPUuigan Chase A Co (File no l -5805) for ihe yeai ended December 31. 2008)

10 10 Bank One Corporation Supplemental Savings and investment Plan, as amended and restated effective December 31. 2008 (incorporated by reference io Exhibit 10 13 lo the Annual Repot l on Form 10-k ol JPMorgan Chase & Co (File no 1-58051 for the year ended December 31. 2008)

10 11 Banc One Corporation Revised and Restated 1995 Stock Incentive Plan, effective April 17. 1995 (incorporated by reference to Exhibit 10) 5 io the Annual Report on Form 10-K of JPMorgan Chase A Co (File No 1-5805) for the year ended December 31. 2008)

10 l ? Form of JPMorgan Chase A Co Long-Term incentive Plan Award Agreement of January 22. 2008 slock appreciation rights (incorporated by relerence to Exhibit 10 25 to Ihe Annual Rejwrt on form 10-K ot JPMorgan Chase SCo (File No 1-5805) for the year ended Oecrmhei 31. 2007)

10 13 Form of JPMorgan Chase A Co Long-Term incentive Plan Award Agreement of January 22, ?00& stock appreciation rights for James Dimon (incorporated by ieference to Exhibit 10 2 7 to the Annual Report on Form 10-K of JPMorgan Chase A Co (File No 1-5805) for the year ended December 31, 2007)[1,1]

10 14 Form of JPMorgan Chase A Co Long-Term incentive Plan Terms and Conditions lor stock appreciation rights, dated as of January 20, 2009 (incorporated by reference to Exhibit 10 20 to the Annual Report on Form 10-K of JPMorgan Chase A Co (File No 1-5805) for the year ended December 31. 2008)[1,1]

10 15 Form of JPMorgan Chase A Co Long-Term incentive Plan Terms and Conditions for Operating Committee member stock appreciation rights, dated as of January 20. 2009 (mcoiporated by reference to Exhibit 10 21 to the Annual Report on Form 10-K of JPMorgan Chase A Co (File No 1-5805) for the year ended December 31. 2008) '"'

10 !o lorniol IPMorgan Chase X Co '..nnglt-im incentive ;>ian Terms ant! Ccmitiiions loi Operating Committee membei stock appreciation rights dated as ot February 3. 2010 (incorporated by rpteience to fxhuwi JO 23 loMip Annual Repon on Fluid 10-k ol JPMorgan Chase A Co (File no 1 5805) lor the year enned December 3l. 2009)'"

10 17 Forms of JPMorgan Chase A Co ! in ig-Term incentive Plan Terms ana Conditions icr slock appreciation rights and restricted stock unns dated as of January is, 201? (incorporated by reference to Exhibit 10 25 to the Annual Repori on Form 10-K of JPM or Ran Chase A Co (file No 1-5805) for the year ended December 31. 2011)

10 18 Forms of JPMorgan Chase A Co Long-Term incentive Plan terms and Conditions lo: stock appreciation rights and restricted stock units lor Operating Committee memheis. dated as of January 17. 2013 (incorporated by reference to Exhibit 10 23 to the Annual Report on Form 10-K of JPMorgan Chase A Co (File No 1-5805) for the yearenderi December 31. 2012)[i,i]

10 19 Form of JPMorgan Chase A Co l ong-Term incentive Plan Terms and Conditions for restricted stock units for operating Committee members, dated as of January 21. 2014 (incorporated by reference to Exhibii 10 l to the Quarterly Report on rorm 10 0 of JPMorgan chase A Co (File No l-580i>)for the quarter ended March 31, 2014)

20 Forms of JPMorgan Chase & Co. Long-leim incentive Plan Terms A Conditions tor restricted stock units for Operating Committee members (Ll S, E U and u K), dated as ol January 20. 2015 (incorporated by reference to Exhibit 10 1 lo the Ouarterly Report on Form 10-Q of JPMorgan Chase A Co (File No 1 -5805) for the quarter ended March 31. 2015)'"

21 form ot JPMorgan Chase A Co Long Term Incentive Plan Terms and Conditions foi restricted stock umls for Operating Committee members, dated as of January 19.2016 (incorporated by reference to Exhibit 10.21 to the Annual Report on Form 10-K of JPMorgan ChaseACo (File No J-5805) fry the year ended December 31. 2015).'*1

22 Form ol JPMorgan Chase A Co Long-Term incentive Plan Terms and Conditions for perlormance share units for Operating Committee members, dated as of January 19, 2016 (incorporated by reference lo Exhibit 10.22 to the Annual Report on rorm 10-K of JPMorgan Chase A Co (File No 1-5805) lor ihe year ended December 31. 2015)

10 23 fcin ol jPMoigan Chase £ Co Long-lenn incentive Plan lerms and Conditions lor perlormance share units and resti icted stock units toi operating Committee members (ll S and UK), dated as ol lanuarv l / 20)' [!*-!*]

10 24 Form ol JPMorgan Chase A Co lerms and Conditions nf Fimm! Allowance (UK) (incorporated by reierenir-to fxhibit io l to the Ouiirterly Repori an rori'i 10-y ol JPMorgan Chase A Co (file No l-5B05)for ihe quarter ended June 30. ?0l 4)

10 25 Form ol JPMorgan Chase A Co Performance-Based incentive Compensation Plan, effective as ol January l. 2006. as amended (incorporated by relerence to Exhibit) 0 27 to the Annual Report on Form 10-K ol ll'Morgan Chase & Co. (File No 1-5805) for the year ended December 31. <;009)[i*]

10 26 Plea Agreement dated May 20. 2015 between JPMorgan Chase A Co and the U S Department of Justice (incorporated by reference to Fxtubit 99 3 lo the Current Repori on Form 8-K ol iPMuigan Chase A Co (File No 1-5805) filed uay 20, ?015)

12 l Computation of ratio ol earnings to fixed charges ™

12 2 Compulation of ratio of earnings lo lined charges and preferred stock dividend requirements *'

21 List of subsidiar les of JPMorgan Chase A Co[111]

22 l Annual Report on Form 11 ■ K of The JPMorgan Chase 40l(k) Savings Plan for Ihe year ended December 31. 2016 (to be filed pursuant to Rule 15d-21 under Ihe Securities Exchange Act Of 1934)

23 Consent of independent registered public accounting firm

31 l Certification ""

31.2 Certification[i,t]

32 Certification pursuant to Section 906 of Ihe Sarbanes-Oxley Act of 2002.[11*]

101.INS XBRL Instance Document[19]

101 CAL XBRL Taxonomy Extension Calculation Linkbase Document."[1]

101 LAB XBRL Taxonomy Extension Label Linkbase Document.'*[1]

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Jl'Uorgan Chase 1 Conoid Annual Rrvort

Financial

riVE-VEAR SUMMARV OF CONSOLIDATED FINANCIAL HIGHLIGHTS

FIVE-YEAR STOCK PERFORMANCE
The Idlicuving iahle and graph compare [d? five-year cumulative local rc-nrn lor JPMorgan Chase A Co ("JPMorgan Chase" or !hi; Tirm") common stock wuh :ne cumulative reiurn ot ihe SAP 500 inner, the KBw Bank index anrj the 5&p financial Index The SAP 500 inrtti is a commonly lele-pnctil united States o! America ("U S ") ecu'iv benchmark consisting ol leading companies from different economic sectors tne KISW flank mrie» seeks to reflect the performance of banks and thrifts that are publicly traded m the U S and is composed ol leading national money center and regional hanks and thrifts The

SAP Financial Index is an index of financial companies, all of which are components o! the SAP 500 The Firm is a component of all three industry indices

The following table and graph assume simultaneous investments o* $100 on December 31 2011, in jpuorgan Chase common stock and <n each of the above indices The comparison assumes that all dividends are reinvested

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Il'Horpin ctiase A (njioib Annual Report

Management's discussion and analysis

This section of IPUorgan Chase's Annual Report for the yeai ended December 31,2016 ("Annual fieporfj, provides Management's discussion and analysis of the financial condition and results of operations ('UDttA') ofJPUorgan Chase. See ffie Glossary of Terms and Acronyms on pages 279-2RS for definitions of terms used throughout this Annual Report The UD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Secunfies Litigation Reform Act of 1995 Such statements arc fused on rne current beliefs and expectations ofJPUorgan Chase's management and are subiect to significant risks and uncertainties These risks and uncertainties could cause the firm's actual results to differ materially from those set forth m such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 138) andin /morganChase's Annua! Report on Form IO-Kforthe yearendedDecember 31. ?Q16 (~zoi6 Form 10-K"), in Pan I. Item ia Risk factors; reference is hereby made to both.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment The Firm's consumer business is the Consumer & Community Banking ("CCB") segment The Firm's wholesale business segments are Corporate 4 Investment Bank ("CIB"). Commercial Banking ("CB"), and Asset A Wealth Management (*AWM") (formerly Asset Management or "AM") For a description of the Firm's business segments, and the products and services they provide to their respective client bases, refer to Business Segment Results on pages 51 -70, and Note 33

INTRODUCTION

iPMorgan Chase A Co.. a financial holding company incorporated under Delaware law in 1968. is a leading global financial services firm and one of lhc largest banking institutions in the United States of America ("U S *). with operations worldwide, the Firm had $2.5 trillion in assets and f 254.2 billion in stockholders' equity asof December 31. 2016 The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management Under the JP Morgan and Chase brands, the Firm serves millions ol customers m the U S and many of the world s most prominent corporate, institutional and government clients

JPU«i;m Chase ft CoJIO 16 Annua' Repori

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank. National Association ("JPMorgan chase Bank, n.a *). a national banking association with u.S branches in 23 states, and Chase Bank USA, National Association ('Chase Bank USA, N A "). a national banking association that is the Firm's credit card-issuing bank JPMorgan chase's principal nonbank subsidiary is J P Morgan Securities LLC ("JPMorgan Securities'), the Firms U 5 investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks One of the Firm's principal operating subsidiaries w theUK. is IP MorganSerunliespic,a subsidiary of JPMorgan Chase Bank, H A.

EXECUTIVE OVERVIEW

rfirs executive overview of the UD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report For a compleie description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety

Financial performance ol JPMorgan Chase

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Return on common equity Return on tangible common equity Look value pei (lure Tangible tux* value nei Uwt Capital ratios"

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Total capital	1S-S	151

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Summary of 2016 results

JPMorgan Chase reported strong results for full year 2016 with net income of (24 7 billion, or $6 19 per share, on net revenue of (95.7 billion. The Firm reported ROE of 10% and ROTCE of 13%.

Net income increased 1% compared with the prior year driven by lower noninterest expense and higher net revenue, predominantly offset by higher income tax expense and provision tor credit losses.

Total net revenue increased by 2% primarily reflecting higher net interest income across all the Firm's business segments and higher Markets noninterest revenue in CIS, partially offset by lower card income in CCB and lower asset management fees in AWM.

Noninterest expense was 155 8 billion, down 5% compared with the prior year, driven by lower legal expense

The provision for ci edit losses was (5.4 billion, an increase of (1 5 billion, reflecting an increase in ihe total consumer provision related to additions in the allowance for loan losses and higher net charge-offs in the credit card portfolio, and a lower benefit in the residential real estate portfolio driven by a lower reduction in the allowance for

JPltaWn Chase i Coy/016 Annual Repori

loan losses compared with the prior year The wholesale provision had a modest increase, largely driven by the impact of downgrades in the Oil A Gas and Natural Gas Pipelines portfolios

The total allowance for credit fosses was $14.9 billion at December 31, 2016. and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1 34%, compared with 1 37% in the prior year The Firm's nonperforming assets totaled $7 5 billion, an increase from the prior-year level of $7.0 billion

Firmwide average core loans increased 15% compared with the prior year.

Within CCB, average core loans increased 20% from the prior year CCB had record growth in average deposits, with a 10% increase from the prior year. Credit card sales volume increased 10%, and merchant processing volume increased 12%. from the prior year. CCB had nearly 27 million active mobile customers at year-end 2016, an increase of 16% from the prior year.

CIB maintained its #1 ranking for Global investment Banking fees with a 8 1% wallet share for the full-year ended December 31. 2016. Within CB. record average loans increased 14% from the prior year as loans in the commercial and industrial client segment increased 9% and loans in the wholesale commercial real estate client segment increased 18% AWM had record average loans, an increase of 5% over the prior year, and 79% of AWM's mutual fund assets under management ranked in the 1st or 2nd quarliles met the past b years

For a detailed discussion of results by line of business ("LOB"), refer to the Business Segment Results on pages 51-52.

The Firm added to its capital, ending the full-year of 2016 with a TBVPS of $51 44, up 7% over the prior year. The Firm's estimated Basel 111 Advanced Fully Phased-In CET l capital and ratio were $182 billion and 12 2%. respectively The Fully Phased-In supplementary leverage ratio ("SLR") lor the Firm and for JPMorgan Chase Bank, N A. was 6 5% and 6 6%, respectively, at December 31. 2016. The Firm also was compliant with the Fully Phased-In U.S. ICR and had (524 billion of mqla as of December 31, 2016. For further discussion ol the LCR and HQLA, see Liquidity Risk Management on pages 110-115

ROTCE and TBVPS are non-GAAP financial measures Core loans are considered a key performance measure Each of the Fully Phased-In capital and leverage measures is considered a key regulatory capital measure For a further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 48-50. and Capital Risk Management on pages 76-85

Management's discussion and analysis

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- 1265 Million ol credit lor cunsumeis
- S?4 tuition ol cretin for u S small businesses

* 1772 billion n! credit tor corporations

-SI.' tntlion of capital raised lor corporate clients and non-U S government entities

- 140 billion ol credit and capital iaised lor nonprofit and US government entities including states, municipalities, hospitals and universities

On October i, 2016 the firm hied with the Federal Reserve and the FDIC its submission (the '2016 Resolution Submission") describing how the t irm remediated certain dpiicienoes. and providing a status report on us actions to address certain shortcomings, that had been identified bv the Federal Reserve and the FOtC in April 2016 when those agencies provided feedback to the Firm as well as to seven other sysiemicallv important domestic banking institutions on then respective 201S Resolution Clans

among the steps taken bv the Firm to address the identified deliciencies and shortcomings were 0) establishing a new Subsidiary that has become an "intermediate holding ton many" and lo which JPMorgan Chase & Co has Contributed the stock of substantially all of its direct Subsidiaries (other than JPMorgan Chase Bank. N.A). as well as other assets and intercompany indebtedness owing to JPMorgan Chase & Co.. (n) increasing the rirm's liquidity reserves and pre-positiomng significant amounts of capital and liquidity at the di m's 'material legal entities" (as defined m the 2016 Resolution Submission), (m) refining the Firm's liquidity and capital governance Irameworks. including establishing a Firmwide "trigger framework" that identifies key actions and escalations thai would need to be taken, as well as decisions that would need to be made, at critical points in time if certain defined liquidity and/or capital metrics were to fall below defined thresholds, (iv) establishing clear, actionable legal entity rationalization criteria and related governance procedures, and (v) improving divestiture readiness, including determining and analyzing divestiture options in a crisis. On December 13, 3016. the Fedeial Reserve and the TDic informed lhe Firm [1] lhat they had determined that the Firm's 2016 Resolution Submission adequately remediated the identified deficiencies in the Firm's 2015 Resolution Plan For more information, see the Federal Reseive and FOIC websites, and lhe rirm's website for the public portion of the 2016 Resolution Submission

Business outlook

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Business outlook

JPMorgan Chase's outlook foi the full-year ..'Ol 7 should he viewed aeainii the backctrop ol the global and u s economies, financial maikets activity tlie geopolitical environment, the competitive environment, client activity levels and legulatory and legislative developments m ihe U.S and other countries where the Firm does business Each ot these mter-related factors will affect the performance ol the Firm and ns lines of business The Firm expects it will continue io make appropriate adjustments io us businesses and operations in response to ongoing developments m the legal and regulatoi y as well as husincss and economic environment m which it operates

In the first quarter of 2017. management expects net imprest income 10 increase modestly compared with the lourth quarter of 2016 During 2017. assuming no change in interest rates since December 31. 20)6, management expects net interest income could he approximately 13 hillion higher than m 2016. reflecting the Federal Reserve's rate increase in December 2016 and expected loan growth Management expects average core loan growth of approximately 10% in 2017

The Firm continues to experience charge-oft rates at oi near historically low levels, reflecting favorable credit trends across ihe consumer and wholesale portfolios Management expects total net charge-of ls of approximately IS billion in 2017 in Card, management expects the portfolio average net charge-off rate lo increase in 2017. but remain below 3 00%. reflecting continued loan growth and the seasoning of newer vintages, with quarterly net-charge ofls rcllecting normal seasonal trends

Management believes that the consumer allowance for credit losses could increase by approximately (300 million in 2017. rcllecting growth across businesses, olfset by reductions in the allowance for the residential real estate portfolio Excluding the allowance related to the Oil & Gas and Natural Gas Pipelines and Metals & Mining portfolios, management expects that the wholesale allowance lor credit losses could increase modestly in 2017 reflecting growth across businesses Continued stability in the energy sector could result in a reduction in the allowance lor credit losses in future periods As management continually looks to enhance its credit loss estimation methodologies, the outlook (or the allowance for credit losses does not take into consideration any such potential refinements

Tiio l irn; con; in lies tn :at.e a cr-onlincr: appiciucri :o m.inaging us expenses while iuvcs:in» in gio«:h and innovation As a lesul". Firmwide jCj.iSterJ expense m 2017 is expected ;o he approximately (SB billion (deluding FiniiwiCp Irgal eipensc)

in CCB. management expects Mm [gage noninterest revenue in decrease apjirp*imately 1700 million m 2017 driven by margn'- compression m a smaller mortgage matkei ann conimued run oil of the Set vicing portfolio, as well as approximately 1200 million of MSR gai.'is in 2016 winch are not expeneel to recur m 20)7 Management expects Card Services noninterest revenue to decrease approximately $600 million in 2011, reflecting ;he amortization ot premiums on strong new product originations and the absence in 2017 of a gain on the sale of Visa Europe interests m 2016 although total CaiG Services revenue is exyecied to increase due to strong growth in net interest income

In the lust quarter of 2017. management expects CCB expense to increase bv approximately $ ISO million compared to the prior Quarter

in CIB Investment Banking revenue m lhe first quarter ol 2017 is expected to he approximately m line with the fourth quarter ol 2016, dependent on the timing ol the i losing of a number of transactions Tieasury Services revenue is expected to he approximately $950 million in ihe hrst quarter ot 2017 tn addition, management currently expects Markets revenue in the lust quarter of 2017 to mm ease modestly compared to the pi ior year quai ter, with results sensitive to market conditions in March in light of particularly strong revenue in March 2016 In Securities Services, management expects revenue ol approximately 1900 million in the hrst quarter ol 2017

tnCB, management expects expense ol approximately 1/75 million in the first quartei of 201 7.

In AWM, management expects revenue to be approximately 13 billion in the first quarter ol 2017

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Management's discussion and analysis

CONSOLIDATED RESULTS OF OPERATIONS

fin section provides a comparative discussion ofJPUorgan Chase's Consolidated Results of Operations on a reported basis for the throe-year period ended December 31.2016. unless otherwise specified Factors that relate primarily to a single business segment are discussed in more detail within that business segment For a discussion of the Critical Accounting Estimates Used by the firm that affect the Consolidated Results of Operations, see pages 132-134.

Revenue
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p* incisal transactions`
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Other meow**

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<b) incboedaaerannf lent iniomeol SI 7 Minn 12 I bihionand II 7 billion (or ihe veari enoed becemoer 31 7016 JOIS and 7014. mpeclnrlr

2016 compared with 2015
Total net revenue increased by 2% primarily reflecting higher net interest income across all the Firm's business segments and higher Markets noninterest revenue in CIB, Partially offset by lower card income in CCB and lower asset management fees in AWM

investment banking tees decreased predominantly due lo lower equity underwriting lees driven by declines in industry-wide fee levels For additional information on investment banking fees, see CIB segment results on pages 58-6? and Note 7

Principal transactions revenue increased reflecting broad-based strength across products in CIB's Fixed income Markets business Rates performance was strong, with increased client activity driven by high issuance-based flows, glohal political developments, and central bank actions Credit revenue improved driven by higher market-rhaking revenue from the secondary market as clients' appetite lor risk lecovered For additional information, see CIB and Corporate segment results on pages 58-62 and Pages 69-70, respectively, and Note 7

Asset management, administration and commissions revenue decreased reflecting lower asset management lees m AWM driven by a reduction in revenue related to the disposal of assets at the beginning of 2016, the impact of lower average equity market levels and lower performance

fees, as well as due to lower brokerage commissions and other fees in CIB and awm For additional information, see the segment discussions of Cib and AWM on pages 58-62 and pages 66-68, respectively, and Note 7. For information on lending- and deposit-related fees, see the segment results for CCB on pages 53-57, CIB on pages 58-62, and CB on pages 63-65 and Note 7, on securities gains, see the Corporate segment discussion on pages 69-70.

Mortgage fees and related income were relatively flat, as lower mortgage servicing revenue related to lower average third-party loans serviced was predominantly offset by higher MSR risk management results For further information on mortgage fees and related income, see the segment discussion of CCB on pages 53-57 and Notes 7 and 17.

Card income decreased predominantly driven by higher new account origination costs and the impact of renegotiated co-brand partnership agreements, partially offset by higher card sales volume and other card-related fees. For further information, see CCB segment results on pages 53-57 and Note 7.

Other income increased primarily reflecting-

- higher operating lease income from growth in auto operating lease assets in CCB
- a gam on the sale of visa Europe interests in CCB
- a gain related to the redemption of guaranteed capital dent securities ("trusi preferred securities")
- the absence of losses recognized in 2015 related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits
- a gain on disposal of an asset in AWM at the beginning of 2016

partially offset br

- a 1514 million benefit recorded in the prior year from a legal settlement incorporate.

For further information on other income, see Note 7.

Net interest income increased primarily driven by loan growth across the businesses and the net impart of higher rates, partially offset by lower investment securities balances and higher interest expense on long-term debt The Firm's average interest-earning assets were 12 1 trillion in 2016, and the net interest yield on these assets, on a fully taxable equivalent ("FTE") basis, was ? 25%. an increase of 11 basis points from the prior year

2015 compared with 2014 Total net revenue tor 2015 was down by 2%, predominantly driven by lower Corporate private equity gains, lower CIB revenue reflecting the impact of business simplification initiatives, and lower CCB Mortgage Banking revenue These decreases weie partially offset by a benefit from a legal settlement in Corporate, and higher operating lease income, predominantly in CCB
Investment banking fees increased reflecting higher advisory tees, partially olfset by lower equity and debt underwriting fees. The increase in advisory fees was driven by a greater share of fees for completed transactions as well as growth in industry-wide fee levels The decrease in equity underwriting fees resulted from lower industry-wide issuance, and the decrease m debt underwriting fees resulted primarily from lower loan syndication and bond underwriting fees on lower industry-wide fee levels.

Principal transactions revenue decreased reflecting lower private equity gains in Corporate driven by lower valuation gams and lower net gains on sales as (he Firm exits (his non-core business. The decrease was partially offset by higher client-driven market-making revenue, particularly in foreign exchange, interest rate and equity-related products in CIB. as well as a gain of approximately $160 million on CCB's investment in Square, Inc upon its initial public offering.

Asset management, administration and commissions revenue decreased laigely as a result of lower fees in CIB and lower perlormance fees tn AWM The decrease was partially offset by higher asset management fees as a result of net client inflows into assets under management and ihe impact of higher average market levels in awm and CCB.

Mortgage fees and related income decreased reflecting lower servicing revenue, largely as a result of lower average third-party loans serviced, and lower net production revenue reflecting a lower repurchase benefit.

For information on lending- and deposit-related fees, see the segment results for CCB on pages 53-57. CIB on pages 58-62, and CB on pages 63-65 and Note 7, on securities gams, see the Corporate segment discussion on pages 69-70. and card income, see CCB segment results on pages 53-57

Other income was relatively flat reflecting a $514 million benefit from a legal settlement in Corporate, higher operating lease income as a result of growth in auto operating lease assets in CCB, and the absence of losses related lo the exit of non-core portfolios in Card These increases were offset by the impact of business simplification in 06, (he absence of a benefit recognized in 2014 from a franchise tax settlement, and losses related to the accelerated amortisation of cash flow hedges associated with the exit of certain non-operating deposits

Net interest income was relatively ftat as lower loan yields, lower investment securities net interest income, and lower trading asset balance and yields were offset by higher average loan balances and lower interest expense on deposits. The Firm's average interest-earning assets were $2 1 trillion in 2015. and the net interest yield on these assets, on a FTE basis, was 2.14%. a decrease of 4 basis points from the prior year

Provision for credit losses

Consumer, excludni credit did	$ 447 J	(Si) 1 419	
Credit card	4,04?	3.122	1.0JO
Tout consumer	4,509	3,041 3,498	

Till provision lorped* tones t S.Ul % 3.827) 3.139 2016 compared with 2015
The provision tor credit losses reflected an increase in the lota) consumer provision and, IP > lesser extent, the wholesale provision The increase m the total consumer provision was predominantly driven by

- a $920 million increase related to the credit card portfolio, due to a $600 million addition in the allowance for loan losses, as well as (320 million of higher net charge-offs. driven by foan growth (including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), and
- a $470 million lower benefit related to the residential real estate portfolio, as the current year reduction in the allowance for loan losses was lower than the prior year The reduction in both periods reflected continued improvements in home prices and lower delinquencies.

The increase in the wholesale provision was largely driven by the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios. For a more detailed discussion of the credil portfolio and ihe allowance for credit losses, see the segment discussions of CCB on pages 53-57, CIB on pages 58-62 , CB on pages 63-65, the Allowance For Credit Losses on pages 105-107 and Note 15

201S compared with 2014
The provision for credit losses increased as a result of an increase in the wholesale provision, fargely reflecting the impact of downgrades in the Oil & Gas portfolio. The increase was partially offset by a decrease in the consumer provision, reflecting lower net charge-offs due to continued discipline in credit underwriting, as well as improvement in the economy driven by increasing home prices and lower unemployment levels. The decrease in the consumer provision was partially offset by a lower reduction in the allowance for loan losses

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Noncompensation expense it'.rcr eased letleciing liorit'lus irom business srmplilicai.on m C13 lower professional and ouisirJe services expense reflecting lower legal services exoense and a reduced nurnhct ol comradcus m ine businesses, lower amortization of intangibles and me absence of a goodwill impairment m Corporate niese factors were partially offset by nigber depreciation exoense largely associated witb higher auto operating lease assets in CCB higher marketing enptnse in CCB and higher HUC-rclaied assessments Legal expense was relatively flat compared with me prior year

Income tax expense

CONSOl IDA I bD OAI ANCE SHEETS ANALYSIS

ihe following is a discussion of me significant changes between December 31 2016 and 2015

Selected Consolidated hatance sheets data

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Debt and equity instri

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2016 compared with 2015

Total noninterest expense derreased bv b% driven by lower legal expense

Compensation expense was relatively flat predominantly driven by higher performance-based compensation expense and investments m scvcial businesses oil set by lire impact ol continued expense reduction initiatives, including lower headcount in certain businesses. Noncompensation expense decreased as a result of lower legal expense (including lower legal professional services expense), the impact of eUicienues, and reduced non-U S lax surcharges These lactors were partially offset by higher depreciation expense horn growth in auto operating lease assets and higher investments in maiketmg. For a further discussion of legal expense, see Note 31

2015 compared with 2014

Total noninterest expense decreased by 4% as a result of lower CIB expense, predominantly reflecting the impact ol business simplification, and lower CCB expense resulting Irom efficiencies related to declines in headcount-related expense and lower professional tees These decreases were partially offset by investment m the businesses, including for infrastructure and controls

Compensation expense decreased predominantly driven by lower porlormance-basod incentives and reduced headcount. partially offset by higher postretirement benefit costs and investment in the businesses, including for infrastructure and controls

(34.5 M I iG 70?

income tlx ex;M-

2016 compared with 2015

The effective la* rate in 2016 was affected by changes in the mix of income and expense subject lo U S federal and state and local taxes, tax benefits related to tne utilization of certain deferred tax assets, as well as ihe adoption of new accounting guidance related to employee slock-based incentive payments These tax benefits were partially of Iset by higher income tax expense from tax audits ihe lower effective tax rate in 2015 was predominantly driven by 12 9 billion of tax benefits, which reduced the rirm's effective tax rate bv 9 4 percentage points Ihe recognition of tax benefits in 2015 resulted Irom the resolution ot various tax audits, as well as the release ot u S deferred taxes associated with the restructuring of certain non-U s entities Tor additional details on the impact of the new accounting guidance, see Accounting and Deporting Developments on page 135 and lor further information see Note 26

2015 compared with 2014

The effective tax rate decreased predominantly due to the recognition in 2015 of tax benefits of 12 9 billion and other changes in the mix of income and expense subject to U S federal, state and local income taxes, partially olfsei by prior-year tax adjustments Sec above for details on the 12 9 billion of lax benefits.

i oani. net or al Accrued interest and accour Premises and equipmen: Goodwill

Mortgage servicing rifimi Other intanfible assets Othei assrn

total isscts

Cash and due from banks and deposits with banks Ttie increase was primarily driven hy deposit growth in excess ot loan growth The Firm's excess cash is placed wiih various cental banks, predominantly Federal Reserve Banks

Federal funds sold and securities purchased under resale agreements

1 he increase was due to higher demand for securities to cover short positions related to client-driven market-making activities in ciB, and the deployment of excess cash by Treasury and Chief investment Office ("CiO") For additional information on the Firm's l iquidny Risk Management, see pages 110 115

Trading assets and liabilities-debt and equity instruments The increase in trading assets and liabilities was piedominanily related to client-driven market-making, activities in CiB The increase in trading assets reflected higher debt and. to a lesser extent, equity instrument inventory levels to facilitate client demand The increase in trading liabilities reflected higher levels of client-driven short positions in both debt and equity instruments For additional mlormation. refer to Note 3 Trading assets and liabilities-derivative receivables and payables

The change in derivative receivables and payables was predominantly related to client-driven market-making activities in CIB The increase in derivative receivables reflected the impact of market movemenls, which increased foreign exchange receivables, partially offset by reduced commodity derivative receivables The decrease in derivative payables reflected the impact of market

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■80,919 52.330 14,131 47.7tB 4.0*6 •67

S 2,490.972 % 2.351.698

movements, which reduced commodity payables For additional information, refer to Derivative contracts on pages 102 -103, and Notes 3 and 6 Securities

ihe decrease was predominantly due to net sales, maturities and paydowns during the year of non-agency mortgage-backed securities ("MBS"), corporate debt securities and asset-backed securities CABS'), offset by purchases of U S Treasuries For additional information, see Notes 3 and 12

Loans and allowance for loan losses The increase in loans was driven by higher consumer and wholesale loans. The increase in consumer loans was due to retention of originated high-quality prime mortgages in CCB and awm. and growth In credit card and auto loans In CCB. The increase m wholesale loans was predominantly driven by originations of commercial real estate loans in CB and commercial and industrial loans across multiple industries in CB and CIB

The increase in (he allowance for loan tosses was attributable to additions to the wholesale allowance driven by downgrades in the Oil ft Gas and Natural Gas Pipelines portfolios. The consumer allowance was flat from the prior year and reflected reductions in the allowance for loan losses in the residential real estate portfolio reflecting continued improvement in home prices and delinquencies, and due to runoff in the student loan portfolio; these factors were offset by additions to the allowance reflecting the impact of loan growth in the credit card portfolio (including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), as well as due

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Management's discussion and analysis

to loan growth in the auto and business banking loan Portfolios For a more detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management On pages 86-107, and Notes 3.4, 14 and 15. Accrued interest and accounts receivable The increase reflected higher receivables from merchants in CCB and higher client receivables related lo client-driven Activity in CIB

Selected Consolidated balance sheets data

December 3 i. tin milbom) :■

Liabilities

Deposits

f-edria: lunds puretuti'd and securities loaned or sold ur Commercial paper Other borrowed lunds T.-adinf lla Dili ties.

Debt and equity instruments

Oei native payables Accounts parable and other liabilities

Bcnvlirial interests issued by consoixlaied variable interest entities ("V1H") Long-term debt

Total liabilities

Stockholders" equity

Total liabilities and stockholders' equity

Deposits

The increase was attributable to higher consumer and wholesale deposits The consumer increase reflected continuing strong growth from existing and new customers, and the impact of low attrition rates. The wholesale increase was driven by growth in operating deposits related to client activity in ClB's Treasury Services business, and inflows tn AWM primarily Irom business growth and the impact of new rules governing money market funds For more information on deposits, refer to the Liquidity Risk Management discussion on pages 110-115, and Notes 3 and 19

Federal funds purchased and securities loaned or sold under repurchase agreements

The increase was predominantly due lo higher chent-dnven market-making activities in CIB For additional information on the Firm's Liquidity Risk Management, see pages 1 loll 5.

Commercial paper

The decrease reflected lower issuance in the wholesale markets consistent with Treasury and ClO's short-term funding plans For additional mlormation, see Liquidity Risk Management on pages 110-115

Mortgage servicing rights

For additional information on MSRs. see Note 17

Other assets
1.17S.179 1*5.66* 11,738 22.705

■7.4JI 49.2J1
190.543 J9.047
795,145
The increase reflected higher aulo operating lease assets from growth in business volume in CCB and higher cash collateral pledged in CtB.

1.279 715 1S7.678 IS 562 21.10!.

74.107 5Z.790
2,216.782 154.190
177638 41,179
288,651
2.104.17S 747.573
S 2.490.972 \ 2 351.698

Accounts payable and other liabilities
The increase was largely driven by higher client-driven activity in ciB

Beneficial Interests Issued by consolidated vies The decrease was predominantly due to a reduction in commercial paper issued by conduits to third parties, partially offset by net new credit card secut mzations. ror further information on Firm-sponsoied vtts and loan securitization trusts, see Off-Balance Sheet Arrangements on pages 45-46 and Note 16

Long-term debt
The increase was due to net issuance of structured notes driven by client demand in ciB, and other net issuance consistent with Treasury and ClO's long-term funding plans, including liquidity actions related to the 2016 Resolution Submission For additional mlormation on the Firm's long-term debl activities, see Liquidity Risk Management on pages 110-115 and Note 21.

Stockholders' equity
The increase was due to net income offset partially by cash dividends on common and preferred stock, and repurchases of common stock For additional information on changes m stockholders' equity, see page 144. and on the Firm's capital actions, see Capital actions on page 84
In the normal course ol business, the Tirm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balancc sheet, while others are off-balance sheet under accounting principles generally accepted in the U.S. (*U 5. GAAP'). The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated SPEs, which are a type of VIE, and through lending-related financial instruments (e g., commitments and guarantees)

Special-purpose entities

The most common type o(VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important pait ol the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks SPEs may be organized as trusts, partnerships or corporations and are typically established foi a single, discrete purpose SPEs are not typically operating entities and usually have a limited life and no employees The basic SPE structure involves a company selling assets to the SPE, the SPE funds the purchase of those assets by issuing securities to investois.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by secuntizing financial assets, and by creating investment products for clients The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require lhat transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate Ihe Firm's Code of Conduct These rules prohibit employees from self-dealing and acting on behalf of the Firm m transactions with which they or their family have any significant financial interest

Implications of a credit rating downgrade to JPMorgan Chase Bank. M A
For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N A could be required to provide funding tf its short-term credit rating were downgraded below specific levels, primarily "P-i", "A-T and "FT for Moody's investors Service ("Moody's"). Standard ft Poor's and Filch, respectively. These liquidity commitments support the issuance of assef-backed commercial paper by Firm-administered consolidated SPEs. in the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE if the commercial paper could not be reissued as it matured The aggregate amounts of commercial paper outstanding held by third parties as of .December 31,2016 and 2015, was 12.7 billion and 18.7 billion, respectively. T he aggregate amounts of commercial paper issued by these SPEs could increase in future periods should clients of the Firm-admtnistercd consolidated SPEs draw down on certain unfunded tendinfi-relaiect commitments. These unfunded lending-related commitments were 17 4 billion and 15 6 billion at December 31, 2016 and 2015, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation For further information, see the discussion of Firm-administered multi-seller conduits in Note 16

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer and any credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade See Note 16 for additional information

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g. commitments and guarantees) to meet the Financing needs ot its customers The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under ihe guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not. in the rirm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 101 and Note 29 For a discussion of liabilities associated with loan sales and securitization-related indemnifications, sec Note 29

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Management's discussion and analysts

Contractual cash obligations

trip accompanying Male summarizes, by remaining mjiurny. JPMorgan Case s significant ronnaiiual casli obligations at December 31. JO 16 The contractual rash obligation* included m the table below reflect the minimum contractual obligation under legally cnlorreahlp contracts with terms ihai are both hxed and determinable deluded irrjin the below table are reriam liabilities wuh variable cash flows and/or no obligation to return a stated amount of principal at maturity
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5.512 I 1.307

Contractual cash obligations
165.666 11,738 14.759 38.927
2S8.3J5 8.980

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IS? 73B li.MiJ 11 331
2.767 61.772
16.140 78.67*
1.129
103.4(7 7,44*

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Total on'balance sheet obligations
OH-balance sheet obligations

Unsettled reverse 'enuiciiaw and securities
51727 48,862
50,771 9*40 1.59a
10.117 7.7*0
7.638 2.0ib
21.767 J.701
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Total oil balance sheet obligations
% 1.676,843 * 117,219 | 79.208 % 138,112 t 2.011.457 S I.8S9 915

of principal at tiie matunTy of the notes. Su: is 05ii|a:ed to return v contracts pension and other prr-u foremen: employee benelil

(a) Ixcludss smictutrd notes on winch II* fir m is not obligated lo reiur n ■ suic-d arr
an amoun: based on Hie aflmnuince ul the structurerl miles. (li) Primarily includes divioend\ declared on preferred and common stock, deterred *
oti l ignitions and insurance I ui In I Mies. (Ci For further mlormation refer In unsettled rewrse repurihase and securities born ld) irtludes accrued inieitst and future contractual inleictl obligations Lxcludes intt
is bawd on the performance ol cerium benchmarks (*) inrlurtn noncancelable operating leases lor premises and equipment iised primarily lor banking purposes and tor energy-related tolluig wrwe
acreements. deludes ihe beneln (4 nonuncelable sublease rentals of 11 4 billion and ll V billon at December ii, 2016 awl 70is ressecrwelv. See
Nur 30 lor more information on lease conimitmenis. (!) At December J1 20lband7015 included unfunded commnmeresol 148 million and (50 million respectively, to ihirdparty pnvate equiiy funds, an
11 0 billion and 1871 million of untunded cummnmerits, respectively to Other equity investments

CONSOLIDATED CA5H ("LOWS ANALYSIS

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Operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's lending anil capital markets activities, including the origination or pun hase of loans initially designated as held-lor-sale Operating assets and liabilities can vaiy significantly in (he normal course ol business due to the amount and liming of cash flows, which are affected bv - client-driven and risk management activities and market conditions The firm believes cash (lows from operations, availahle cash balances and its rapacity to generate < ash through secured and unsecured sources are sulficieni to meet the Firm's operating liquidity needs Cash provided by operating activities in 2016. 2015 and 2014 reflected net income alter noncash operating adjustments Additionally, tn 2016 cash provided reflected increases tn accounts payable and trading liabilities related lo client-driven market-making activities in CIS The mcicasc in trading liabilities reflected higher levels of client-driven short positions in both debt and equity instruments Cash used in 7016 reflected an increase in trading assets, an increase m accounts receivable (torn merchants in CCft and higher client receivables related to client-driven activities in CiB. and higher net originations and purchases from loan held-for-sale activities The increase in trading assets reflected higher debt and, to a lesser extent, equity instrument inventory levels to facilitate client demand Cash provided in 201S resulted from a decrease in trading assets, predominantly due to client-driven market-making activities in CIB, resulting in lower levels of debt and equity secui iocs Additionally, cash provided reflected a decrease in accounts receivable due to lower client receivables and higher net proceeds from loan sales activities. This was partially offset by cash used due to a decrease in accounts payable and other liabilities, resulting from lower brokerage customer payables related to client atiiviry m CIS. in 2014. cash provided reflected higher net proceeds from loan securitizations and sales activities.

Investing activities

The Firm's investing activities predominantly include originating loans for investment, depositing cash at banks, and investing in the securities portfolio and other short-term interest-earning assets Cash used in investing activities in 2016 resulted from net originations ol consumer and wholesale loans. The increase in consumer loans was due to retention of originated high-quality prime

mortgages in CCD and awu and growth ol credit card and auto loans in CCB The increase m wholesale loans was predominant lv driven by originations of commercial real estate loans m C9 and commercial and industrial loans across multiple industries in CB and CfB Additionally, tn 2016, cash outflows reflected an increase m deposits with banks primarily due to growth in deposits in excess of giowth in loans, an increase in securities purchased under resale agreements due to higher demand for securities to cover short positions related to client-driven market-making aruvmej m CJB and the deployment of excess cash by Tieasury and CIO Cash provided by investing activities during 2015 predominantly lesultcd from lower deposits with banks due to the Firm's actions to reduce wholesale non-operating deposits, and net proceeds from paydowns, maturities, sales and purchases ol investment securities Partially oflsetting these net inflows was rash used lor net originations of consumer and wholesale loans, a pot lion of which ret let ted a shift from investment securities Cash used in investing activities during 2014 resulted from incieases in deposits with banks attributable to higher levels of excess lunds, cash was also used for growth in wholesale and consumer loans in 2014 Partially offsetting these cash outflows in 2014 was a net decline m securities purchased under tesale agreements due to a shift in the deployment ol the Firm's excess cash by Treasury and 00 Investing activities in 2014 also reflected net proceeds from paydowns, maturities, sales and purchases of investment securities

Financing activities

The Firm's financing activities includes acquiring customer deposits, issuing long-term debt, as well as preferred and common stock Cash provided by financing activities in 2016 resulted from higher consumer and wholesale deposits, and an increase in securities loaned or sold under repurchase agreements, predominantly due to higher client-driven market-making activities in CIB. Cash used in financing activities in 2015 resulted from lower wholesale deposits partially offset by higher consumer deposits Additionally, in 201b cash outflows were attributable to lower levels of commercial paper due to the discontinuation of a cash management product that offered customers the option of sweeping their deposits into commercial paper, lower commercial paper issuances in the wholesale markets, and a decrease in securities loaned or sold under repurchase agreements due to a decline in secured financings Cash provided by Financing activities in 2014 predominantly resulted from higher consumer and wholesale deposits. For all periods, cash was provided by net proceeds Irom long-term borrowings, and cash was used (or repurchases of common stock and cash dividends on common and preferred stock

For a further discussion of the activities affecting the Firm's cash flows, see consolidated Balance Sheets Analysis on pages 43-44, Capital Risk Management on pages 76-85, and Liquidity Risk Management on pages 110-115.

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Management's discussion and analysis

Non-GAAP Financial measures

The Firm prepares its Consolidated Financial Statements using U 5 GAAP, these financial statements appear on pages 141-145. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of tht; i irm's performance with other companies' U.S. GAAP financial statements

in addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results, including the overhead ratio, and the results of the lines of business, on a "managed" basis, which are non-GAAP financial measures. The Firm's definition of managed basis starts with the reported U 5 GAAP results and includes certain reclassifications to present total net revenue for the Turn (and each of the reportable business segments) on an FTE basis Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxahle investments and securities, these non-GAAP financial measures allow management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources The corresponding income tax impact

The following summary tahle provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis
f 1,101,404 1 2,01

Net interest income excluding ClB's Markets businesses tn addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding net interest income arising from ClB's Markets businesses io assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. CIB's Markets businesses repiesent both Fixed income Markets and Equity Markets The data presented below are non-GAAP financial measures due to the exclusion of net interest income from ClB's Markets businesses ("CIB Markets") Management believes this exclusion provides investors and analysts with another measure by which to analyze Ihe non-markets-related business trends ol the Firm and provides a romparable measure to other hnancial institutions that are primarily focused on lending, investing and deposit-raising activities

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1.474 11.010 10.707
1,474 11.177 6.760

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Average Interest-earning Miseti etcMInf '*
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Net Interest yield on averagi inteiest-tarnInf assets - managed basis
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Management's discussion and analysis

Tangible common equity ROTCE and TBVPS

langihl-.- common equity riCC") TOKt and TSVPS are each nnn-GAA' finnnci.il <http://finnnci.il> measures `CF represents mo i irm $_5$ common s:ockholrters equity (i e . ioi.h stockholders equity less luelerren stock) less goodwill and identifiable muni'.ible assets (01:101 than MSRs) net ot related delerred tax lialnimes ROlCf nieaswes the H.-m s net income applicable to common equity as a peiceniage of average TCt TBVPS represents the Firm's KL at period em! divided by common shares at period-end Kt. ROltt and tbvps are ulilitetl by the nrm. as well ai investors and analysis, w> assessing the firm's «se ol cqwlv itie following summary table provides a reconciliation from the Firm's common stockholders eauiiv 10 TCP

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BUSINESS SEGMENT RESULTS

The Mrm is managed rin a line ol business basis There .ue lour major reportable business segments - Consumer A Community Banking Corporate & investment Dank. Commercial Hanking and Asset & wealth Management (lormcrly Asset Management) in addition, there is a Corporate segment

The business segments are determined based on the products and services piovided. 01 the tvne of customer

" Consumer Businesses '.

served and thev reflect the manner 111 which financial information =s currently evaluated by management (results ol these lines ol business are presented on a managed oasis F01 a definition of managed basis, see explanation and Reconciliation ol the Firm 5 use of Non-GAAP Financial Measures, on pages 4S-50

. Wholesale Businesses ;

j tnfibit common nuny

HtTuffi on UnjjiNt common equity Ijr.pibie rook value per share

; Asset I wealth . ;. kUna$*mera

Key performance measures

The rirm's capital. RWA, and capital and leverage ratios that are presented under Hasel III Standardized and Advanced Fully Phased-ln rules and the Firm's. JPMorgan chase Bank. n a '5 and Chase Bank USA. N A's SLRs calculated under the Basel ill Advanced Fully Phased-ln rules are considered key regulatory capital measures Such measures aie used by banking regulators, investors and analysts to assess the rirm's regulatory capital position and to compare the Firm's regulatory capital to that of other financial services companies

For additional mlormation on these measures, see Capital Risk Management on pages 76-85

Core loans are also considered a key performance measure Core loans represeni loans considered central to the Firm s ongoing businesses, and exclude loans classified as trading assets, runoff pod folios, discontinued portfolios and portfolios the Firm has an intent to exit Corp loans are utilized bv the Finn and its investors and analysis in assessing actual growth in the loan portfolio

JPMorgan Chase (0)77016 Annual drporr

- Conswnrr ' Banking/ Chase wraGh

Description of business segment reporting methodology Results ol the business segments aie intended to reflect each segment as it it were essentially a stand-alone business The management reporting process that derives busmess segment results includes the allocation of certain income and expense items descnbed in more detail below The firm also assesses the level of rapiial required for each line of business, on at leasl an annual basis. For further information about line ol business capital, see Line of business equity on page 83 The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment icportmg. and lurther refinements may bo implemented in future periods Revenue sharing

When business segments join efforts to sell products and services to lhe rirm's clients, the participating business segments agree (0 share revenue from those transactions The segment results reflect these revenue-sharing agreements

Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business segment and to tiansfer the primary interest rate risk and liquidity risk exposures to Treasury and CIO within Corporate. The funds transfer pricing process considers the interest rate risk, liquidity risk I and regulatory requirements of a business segment as it it ■ were operating independently This process is overseen by

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. - Commercial . tend** .

senior management and reviewed by ihe Firm's Asset-Liability Committee ("ALCO") Debt expense and preferred stock dividend allocation as part of the lunds transfer pricing process, largely all of the cost of the credit spread component of Outstanding unsecured long-term debt and preferred stock dividends is allocated to the reportable business segments, white (he balance of the cost is retained in Corporate. The methodology to allocate the cost ol unsecured long-term debt and preferred stock dividend to the business segments is aligned with the Firm's process to allocate capital. The allocated cost of unsecured long-term debt is included in a business segment's net interest income, and net income is reduced by preferred stock dividends to arrive at a business segment's net income applicable to common equity Business segment capital allocation changes The amount of capital assigned lo each business is relerred to as common equity On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fully Phased-In RWA. Effective January 1, ?017, the Firm's methodology used to allocate capital lo ihe rirm's business segments was updated. The new methodology incorporates Basel in Standardized Fully Phased-In RWA (as well as Basel 111 Advanced Fully Phased-In rwa), leverage, the GSIB surcharge, and a simulation of

Management's discussion and analysis

capital m a severe stress environment. The methodology will continue to be weighted towards Basel lit Advanced Fully Phased-tn rwa because the Firm believes it to be the best proxy for economic risk The Firm will consider further changes to its capital allocation methodology as the regulatory framework evolves In addition, under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business. £xpense allocation
*:' *>js;- miUkvA mis ,■*

where business segments use services provided by corporate support units, or another business segment, (he costs of those services are allocated to the respective business segments The expense is generally

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35.71*

7,453 6.BBS

11.04S 12.119

(4>7) 267

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Consumer a Community Ranting Corporate & irwettmrnr Dank Commercial Ranking Asset I Wraith Managemeni Corporate

Total

allocated based on actual cost and use of services provided in contrast, certain other costs related to corporate support units, or to certain technology and operations, are not allocated 10 the business segments and are retained m Corporate. Expense retained in Corporate generally includes parent company costs that would not be incurred if the segments were stand-alone businesses, adjustments to align corporate support units, and other items not aligned with a particular business segment.

r" 'Total noninierfff expense/-
- 201* '.
201 s<\'

S 24,905 S 24.909i 25.609

18.997 21.36123.273

2.914 1881Z.695

8,478 8,886 8 538

The following provides a comparative discussion ol business segment results asof or for the years ended December 31, 2016, 2015 and 2014

. ZC1S

20,010 } 18,911 % 18.759

16.224 12.181 11.322

977
1,159
4'2

4.519 4.004 4.187

1.S67 3.733 3,490

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Imortgajjes and home equrty Joaiis?Card, Commerce'4 ^.j Solutions t^uto.Issues credit arditojaitsumrrs srMilb1i^Hs«^rh^
tVmeTtitarirSgrl^ andtJ 'ita^a^dten^siiSwt lom&K
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Selected Income statement data
(3.137 f 3.039

2.490 4,364

S.077

Lending-and deposit-related lees S 3,231 Asset manage men',, administration "nd

3.560 S.779

2.S1I 5,491 2,281

commissions ' 2.091 Mortgage tees and retired

15,255 29.6W

15.937 28,4 Jl

1S.592 28.228

income Card income All other incornp

44,915 4.494

43.820 3.059
44.368

3,520

Noninttmt revenue

Net interest income
Total nrl rmnuc

Provision lor credit losses Noninterest expense Compensation expense

9,723 9.770 10.538

11,182 15.139 15.071

15.239 6.0S4

15.852 6,063

15.SU S.B02

Total noninterest expense
IrKomt tai expense

I 9.714 t 9.789 j 9.185

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Consumer 8 Community Barking Corporate A investment Bank Cratunerual Banking Asset 8 Wealth Management

Total

J 520 1 (161) (189)

9.714 : 10J15 7,657 1.251 (704)

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7.826 18.316
6.8|7

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Consume! 8 Business Banking S1MS9 117.983 118.226 7,3*1

1,190 2.370
Mortgage Banking Card, Commerce Solutions 8

Net production revenue Hei mortgage servicing

% 2.490 S 2,511 1 3.560

Fnancial ratios
Return on
comma
Overhead
ratio
Noif In the discussion and ihe taUn whicti lob*. CCB presents certain financial menu'n allien eiriude the impact (X PO loans, ihese are non-GAAP

<b) Included vs* risi mt-cgemert ol 1717 miluc*, (U17) millen and (CS) million lor the years rided Oecembn 31.2016,2015 and 2014. resperiivtly

ll'Morgan Chasr \ ro./2016 Annual deport

Management's discussion and analysis

?016 compared wuh 2015

Consumer 5 Community Banking net income was 19 7 >n!lion a decieaw ul 1% compared with the prior year dnven bv mgiiei provision lor credn losses predominantly offset []v lughei not revenue

***iei revenue was (44 <l tullion an increase of 2% compared wiiN tne prior year Net mteresi income was $29 7 hiiion up dnven hv higher deposit halanccs and higher loan balances carnally oltset by deposit spread compression and an increase in the reserve to: uncollectible interest and tees in Ciedit Card Noinnieresi levenue was $1S 3 billion, down l'% onven »v higher new account ongmanon costs and thf imparl ot ienegoualed co-brand partnership agreements m Ciedit Card and lower mortgage servicing revenue predominantly as a result of a lower level of third-party loans serviced, these lactors were predominantly offset by highci auto lease and card sales volume higher card and deposit-related fees, higher MSR risk management results and a gain on (he sale ol visa Europe interests See Note 17 lor further information regarding changes m value ol the MSR asset and related hedges, and mortgage fees and related income The provision for credit losses was $4.5 bilhon. an increase ol 47% Irom the prior year The increase in iho provision was driven bv**

- **a (920 million increase related lo the credit card portloho. due lo a $600 million addition in the allowance for loan losses, as well as 13 20 million of higher net rhargc-offs, dnven by loan growth, including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio,**
- **a $450 million lowei benefit related to the residential real estate portfolio, as the current year reduction in the allowance tor loan tosses was lower than the prior year The reduction m both periods reflected continued improvements in home prices and lower delinquencies and**
- **a J150 million increase related to the auto and business banking portfolio, due lo additions.io the allowance tor loan losses and higher net charge-offs, reflecting loan growth in the portfolios Noninterest expense ol $24 9 billion was flat compared with the prior year, driven by lower legal expense and branch efficiencies offset by higher aufo lease depreciation and higher investment in marketing.**

20lScoiTi[jied with ?0H

Cunsimi-.T & (omnium;* Banking net income was (o .S billion, an increase ol 7'* compared with the tinor year dnven by lower norunteresi expense and lower provision loi credit losses partially offset by lowei net revenue Net revenue was J <3 B billion adocreaseot I % compared with the prior year Net interest income was $28 ? billion down 1%, dnven bv spread compression predominantly offset tw higher cieposn balance-,, lug'ier loan balances largely : "suiting Irom originations of high-quality moriiM;;'.-inans mat nave heen retained, and improved credit quality including lower reversals ol mieres: and Ices due to iowcr net charge-offs m Credit Card Noninterest revenue was $] 5 6 billion down 2%. driven by lower mortgage servicing revenue largely as a result of lower average third-party loans serviced, lower net mortgage production revenue reflecting a lower repurchase benefit and lhe impact of renegotiated co-brand partnership agreements in Credit Card largely offset by higher auto lease and card sales volume, ihe imparl of non-core portfolio exits in Credit Card m the pnor year, and a gam on the investment in Square, Inc. upon us initial public offering The provision for credit losses was S3 l billion, a decrease of 13% from the prior year, reflecting lower net chaige-ofts. partially olfsel by a lower reduction in the allowanre lor loan losses The current-year provision icflerted a $1.0 billion reduction m the allowance lor loan losses due to continued improvement in home prices and lower delinquencies as well as increased granularity in the impairment estimates in the residential real estate ponlolio and runofl in the student loan portfolio The prior-year provision reflected a $1.3 billion reduction in the allowance for loan Josses due (0 continued improvement in home prices and lower delinquencies in the residential real estate portfolio, a decrease in the Credit Card asset-specific allowance resulting Irom increased granularity ol the impairment estimates and lower balances related to credit card loans modified in troubled debt restructurings ("TDRs'). runoff in the student loan portfolio and lower estimated losses m auto loans

Noninterest expense was $24 9 billion, a decrease of 3% from the prior year, driven by lower headcount-related expense and lower professional fees, partially offset by higher auto lease depreciation

Selected met net
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tin millions. e«rpt neadcountl 2014

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54.545 177.010 231,555 131.16S
6 /63
Deposits Common equity
63.573 7.623 457.347 416 580 3*1.116 301.700 586.637 530 038
Sl.000 51.000 132.802 127.0V4

Selected metrics as ol or tir tw ended

Credit din and quality statistics Nrmacriual loan* ****
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Hi/sideulial mc;l[;rl];r and other Mrkligagi- Banking Credit Card Mho
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t 4.344 J 4 084
1 16%
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Total net cturgr-offl Kel charge off raie* Consumer & Business Banking Home equity t*
Residenial moi tgage and o'.he
Mortgage Hanking**
Credit Card**
Ants
Student
Total net charge-oils raie* 1 30» ddy delinquency ra:e
Mortgage Banking***
Credit Card**
1 753 1 703 1 703

1,328 2,311 4.034
4111 o Student*
2.188 3 325

Allowance for loan losses Consumer & Business Banking Mortgage Banking, excluding
PCI loans Mortgage Banking - PCI loans* 1 Credit Card

Student

Total allowance for loan
$ 9.149 t V.lbS 110,404

(a) Fxckldes PCI loans. The Firm is recogrwing interest income en each pool ol PO loans al ihey are all performing.
<bl al December 31.2016. 2015 and 7014. nonaccrual loansexcued bans 90 or more days past due as folowv (l) mortgage loins insured by U.S government agencies ol IS OMimv, 16 1 billion and (7.1 billion respectively; and (21 student bant insured by U.S government agences under ihe Federal rami" education Loan Program (TrFIP-Jol (263 m:Rnn. 1290 million and S367 million, respectively these amounts hate been elcluded based upon the government guarantee.
(c) net cnarge-ofts and the net charge-oil rates (or ihe years ended December 31.2016,7015 and 2014. elcluded 1156 million. (208 ml I lon. and 1533 million, respectively, ot write-olls in ihe PCI portfolio These wite off s decreased ihe allowance lor loan tosses lor PCI loans. For furtner mlormaton on PCI write-chs. see summary of chaigel Hi [hl
* 106

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Management's discussion and analysis

ld) deludes the impact ot PCI loins. For the yean ended December 31. 7016.2015 ind 2oi«, ihe net charge-oil rates including ihe impact ol pci loans were » tallows. (Il name equity ol 0 34%. 0 45% and 0 65". respectively: (2) residential montage and ether or 0 01". -" and QUI" res.Tec lively. (31 Mortgage Hanking ofQ09".0 US and ◻ 77". rel pec lively; and (4) total CCB ol 0 95%, 0 99" and 1 22%. respecllvely
(f 1 Average credii card bans included bans held lor tale of 184 million.
Il 6 billion and (509 million tor the yean ended December Jl. 2016.
?015trvl20H,r"lptct"x"T These amountl are erttoded when
calculating ihe net charge-oft rate (l) At December 31,2016.2015 and 2014, excluded mortgage bans
mured try U S. government agencies ol 11 Obitfcon. la 4 bfibon and
1" 7 billion, respenncly that are 30 or more days past due. These
amountl have been elchined based upon the government guarantee. tg> deludes PCI bins. The 30' day delinquency rale lor PO bans was
9 92%, J].2J"art ll JJ»at rJerelDtm jl. 7016.7015 and 201«
respectively
'h| Period end credit card bans included bins held lor-sale ol (101 million. (76 million and 110 billion al December 31 2016.2015 and 2014, respecllvely ihese amount" are evcluded when calculating delinquency rates.
ll) deluded tludent bans mured by U S gnverrmmi agencies undtl lftlP ol 1465 million, 1526 m.llion and 1654 million as DecemSel 31. 2016.2015 and 2014, respectively. Cm ire 30 or more days past due. ihese amounit luve been excluded bated upon the guvemment

Selected metrics

As of or lor the year ended

ol ratios and ,

tusinen Metrics

CCB households (in millions) dumber of 6ranches Active digital customers
(in thousands)" Active mobile customers
(in thousands)" Debt and credit card sales

Consumer 1 ≡utiness Banking Average deposits Deposit margin

Client investment assets

43.81* 26.51*

* 8179 1 753 8 } 7070

1 5701 1 515 7 1 472 3

Ul* 190* 7 21*

1 7.1 1 68 t 6 6

lU.i 113 5

Mortgage servicing-related matters The Firm has resolved the majority of the consent orders and settlements into which it entered with federal and slate governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities However, among those obligations, the mortgage servicing-related Consent Order entered into with the Federal Reserve on April 13, 2011, as amended on February 28, 2013, and certain other settlements remain outstanding. The Audit Committee of the Board of Directors provides governance and oversight ol the Federal Reserve Consent Order

The Federal Reserve Consent Order and other obligations under certain mortgage-related settlements are the subject of ongoing reporting to various regulators and independent overseers The Firms compliance with certain of these settlements is detailed in periodic reports published by the independent overseers The Firm is committed to fulfilling its commitments with appropriate diligence

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1 1 29 5

59.3 703
48 5

I 101.4 1 106 4 1 78 0

% 846.6 I 910 1 1 948 8

591.5 674 0 751 5

RAtb ol MSR carrying value (period-end) to third -party mortgage tans serviced (period end)

USD revvwie multiri(e [M]

1 01* 7.941

0 98*

2 SOx

Cledit card sales volume New accounts opened

Card Services Met revenue ra:e Commerce Solutions Merclunt processing volume Auto

Loan and luasc originatKjn A wage Auto operal i rig least

(a) users ol ill >cl> anrinr mobile rHallorms who luvf bued in within llie past 90 days
(») usen ol an mnhilr plalfolms who ha"r togged m ".thm tt" pln 90 davt
c) llrmwdp moficage orejlnaron volume aas 5117 4 oillicn, f;ls 7 tyllwn and 1"1.3 bi:llonlur the wan ended December]1 701* 2015and 7014 respectively
d) Rrtvetmll (he rjlo ol use carrying value (orrkd end) lo lhird ol'ty malgage bam termed (period-end) divided by the nbr ol klan servicing rrlattd revenur lo third-party nn"UX» loam ter need (average)

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Management's discussion and analysis

CQRPQRATb & INVrSIMbNT BANK

The Corporate A investment Bank, which consists of "duikirig arid ^ . V.broad suite" of investtnent banking, market-making,.-. ■ -1 i> prime brokerage! and tjoasury and Wurttiw products ' ancf services (o'j gfobal cfieitf base of cocperAtiotis, -. 1 Investors. ffnancUl Insiit^
.municipal entities. Banking offers » full rjnge of '■' ""i,
investment banking products and services In all major;-:
capital markets, Including rivisjn^
strategy and structure,-tipiti-r^ arid' <
debt marteti/Mwef^
synr^catmn? Banking also mctades Treai^'sV^
' which provides transaction services, ajmrsting of cash f {
man^eme'nt and llquidity'solut

Inv^w.Semees is a global rrirtetirriakcr in"cash':;/,-.} , securities and derivative insu^umeri^ ■sophlstrcate^ riik nw brok'waie, ajiiJ research. Markets itnYertorServiw!',"; also includes Securities Seryic^ ycu'itodlan wtiich proviries'custody, lurid acrauntirtf ami: admlriistraU arid securities lending pT^urti'•'.;!,. priricipally for asset mana^ *arid pubik'and private inmlTMnllundi.^ *-&*?|13*

Selected income statement data

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investment banking lees Principal iransactions lenrtinf anddeposit rela:edler Assel rriaru|»men;

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Het meresl income**

Total net revenue

brovmon (or crfdil tosses

tteamtcrest expense

Compensation eipense

9.54* 9.448

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10.449 12 824

Total noninterest expense, Income kef ore income tax

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11.849 11.463 3.759 4.575

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(■) WLludeC lai-equrvalerr: adjusl.iirnli, predommanily due 10 income !■> credits related io alternative energy investments, income ti< credits end amoflualavi ol Ihe toil of nvestmeriti in allonuble houline, propels, ind tei-ewwipl income Irom mimnpil bonds ol Il.0 Cation, ft 7 tvJIOn jnd 11 *bliKMIM the rurt ended December 31 2016. 2015 and 701*. respectively

Selected income statement data

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15.259 1} 592

S.740 5.69*

3.591 1 777

Revenue by buunets Investmeni Hjr4i:iJJ treasury Services

r-iird income uarke'.s F.quity Uartels Seem ii Sri wees Ciedit adjustments 8 0:hi

Total Uarkeii 8 investor

135.216 133 547 1 14 595

la) fttecivr January I 2016 canvils pi manly of credit dlualnn idiMmenu (TV**l maiupd bv the Oetfii wrtro.*io Group running vaibttD* adjustment ("iv*") j.-.d ova on denvaiivn tesuitt areonmiril* reported in Principal iransacirans. Prior nmodl alio inchaV DVA on lair value option flee led liabilities. Result air aiesemec nei m associated hedging acuviiies and net ol cva ino • va amounts allocated t» nwd inco>ne yirketsand tauity mi km (lirelive Jinwy 1, 2016 cranees in nva on laii value option elected (vitalities is recognized in OCI For additional information, see Accounting and Reporting Developments on uee i is ane Notes 3,4 am 75

2016 compared with 2015

Nel income was 110 8 billion, up 34% compared with Ihe pnor year, driven by lower noninterest expense and higher net revenue, partially offset by a higher provision for credit losses

Banking revenue was S10 8 billion, down 6% compared with the prior year Investment banking revenue was 16 0 billion, down 7% from the prior year, largely driven by lower equity underwriting fees The Firm maintained its tl ranking for Global Investment Banking fees, according to Dealogic Equity underwriting fees were Si 2 billion, down 19% driven by lower indusiry-wide fee levels, however, the Firm improved its market share and maintained its * 1 ranking in equity underwriting fees globally as well as in both North America and Europe and its ill ranking by volumes across all products, according to Dealogic Advisory fees were (2.1 billion, down 1 %; the Firm maintained its «? ranking for M&A, according to Oeafogic Debt underwriting fees were (32 billion, the F irm maintained its SI ranking globally in fees across high grade, high yield, and loan products, according to Dealogic. Treasury Services revenue was (3.6 billion Lending revenue was $1.2 billion, down] 7% from the prior year, reflecting fair value losses on hedges of accrual loans

Markets A investor Servnes ;evenur was S24 4 pillion un 11 % irom ihe prior veji I ued income Markets revenue was $ l s 3 billmn up 21 % from the prior year, driven by broad strength acioss products Rates performance was stiong. wi-h increased client activity driven by high issuance-based flows global political developments, and central bank anions Credit and Seciiriiued Products revenue improved driven by highei market-making revenue Irom the secondary m.uket as clients' risk appetite reuweied. and due lo increased fmanrmg activity Equity Markets revenue was SS 7 billion, uii 1% compared to a strong prior-year Set unties Services revenue was 13 6 billion, down 5% horn the pnor year, largely driven by lower lees and commissions Credit Adjustments and Other was a loss ol SI 75 million driven by valuation adjustment!, compared with an (11 million gam in pnor-year, which included funding spread gains on Ian value option elected liabilities

The provision lor credit losses was (563 million, compared io $332 million in the prior year, reflecting a higher allowance lor credit losses, including the impact of selerl downgrades within the Oil & Gas portfolio Nonmierest expense was (19 0 billion, down 11% compared with the prior year, driven by lower legal and compensation expenses 20is compared with 2014

Net income was (8 1 billion, up 17% compared with (6 9 billion in the prior year Ihe increase primarily reflected lower income tax expenses largely rellcctmg the release in 2015 of U.S delerred taxes associated with the restructuring of certain non-U 5. entities and lower noninterest expense partially offset by lower net revenue, both driven bv business simplification, as well as higher provisions lor credit losses

Ranking revenue was S M 5 ,'nllinn up 1 % versus Ihe prior year investment banking revenue was lb 4 tiillion up 4% from the prior year, dnven by higher advisory fees partially offset by tower dehi anrj ecuity underwriting fees Advisory lees were 12 1 billion up 31 % on a greater share of lees lor completed transactions <ts well as growth m the industry wide lee levels The Tirm maintained its »2 ranking for M&&, according to Dealogic Oebl under writing fees were $3 2 hildon. down t>%. unmanly related to lower bond underwriting and loan syndication fees on lower industry-wide fee levels The Firm ranked fl 1 globally in fee share across high grade, high yield and loan products Equity underwriting fees were (1 4 billion, down 9%. driven by lower industry-wide fee levels The Firm was 01 in equity underwriting fees in 201S, up from 03 in 2014 Treasury Services revenue was 13 6 billion, down 3% compared with the prior year, primarily dnven by lower net interest income, tending revenue was 11 S billion, down 6% from the prior year, driven by lower trade linance revenue on lower loan balances Markets & Investor Services revenue was (22 1 billion, down 5% from Ihe prior year Tixed Inrornc UarVeis revenue was (12 6 billion, down 11% from the prior year, primarily driven bv the impact of business simplification as well as lowei revenue in ciedit-related products on an industrywide slowdown, parlially offset by increased revenue in Rates and Currencies ft Emerging uarkets on higher client activity The lower Ftxed income revenue also reflected higher interest costs on higher long-term debt. Equity Markets revenue was (5 7 billion, up 13%. primarily driven by higher equity derivatives revenue across all regions Securities Services revenue was (3.8 billion, down 13% from the prior year, driven by tower fees as well as tower net interest income.

The provision (or credit losses was (332 million, compared to a benefit of (161 million in the prior year, reflecting a higher allowance for credit losses, including the impact of select downgrades within the Oil ft Cas portfolio Noninterest expense was 121.4 billion, down 8% compared with the prior year, driven by the impact of business simplification as well as lower legal and compensation expenses

IPlijiganChaseS CuJ?016 Annual Report

Management's discussion and analysis

Selected metrics

' *10(01 for the year ended .

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Selected metrics

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Hunperforming assets. Nonaccmal loans.

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Global

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Core Loans Common equity Selected balance sheet data

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Loans ret aire

Core Loans" Common equity

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100.772 61.000

1854,71; 317.535 64,833 95 764

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99.500 61.000

Nonattrual loans held tor sale arid loans at fair value

Total nonaccrual loam DerivaUvc receivables

Allowance lor credit losses. Allowance lor loan

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Allowance for loan losses to periori-i-nd loans retained, excluding trade finance and conduits'[1]*

2,221 0.15%

1.473 (0 011%

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Markets Revenue

The following table summarizes select income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets Markets revenue comprises principal transactions, fees, commissions and other income, as well as net interest income fqj a description of the composition of these income statement line items, see Notes 7 and 6. Principal transactions reflects revenue on financial instruments and commodities transactions that arise from client-driven market making activity Principal transactions revenue includes amounts recognized upon executing new transactions with market participants, as well as "inventory-related revenue", which is revenue recognized from gains and losses on derivatives and other instruments that the Tirm has been holding in anticipation of, or in response to, client demand, and changes in the fair value or instruments used by the Finn to actively manage the risk exposure arising Irom such inventory. Principal transactions revenue recognized upon executing new transactions with market participants is driven by many factors including the level of client activity, the bid-offer spread (which is the difference between the price at which a market participant is willing to sell an instrument to the Firm and ihe price at wtiich another market participant is willing lo buy it from the Firm, and vice versa), market liquidity and volatility These factors are interrelated and sensitive to the same factors that dnve inventory-related revenue, which include general market conditions, such as interest rates, foreign exchange rates, credit spreads, and equity and commodity prices, as well as other macroeconomic conditions.

(b) Ma«crmert uses allowance lor loan Vws lo pencd rad leant retained niliMinf trade finance and conduits, a no-i-CAAP tinjncul measure 10 provide a mot meaninflul assessment ol em's allowance com ate rai io

For the periods presented below. Ihe predominant source o executing new transactions

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- Tat6 . ■ Markets.

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Debt underwrmni"

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15.259 1 5.740 1 20.W 1 12,597 1 5.694 t 18.286 1 14.075 1 5.044 1 19.119

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Management's discussion and analysts

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Total international nv.fi <http://nv.fi> America

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AUC (period-end) (11 North America
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1376.217 1395,29/ (4I7.J6<

I 12.290 (17 034 111 98;

AH other irpom 1,230 7.90V

Total AUC (20.520 1 19943 (20 S4<

(a) total net revenue it bated predominantly on the domicile ol Ihe client 01 kxatenotihc trading desk at applicable Loant Mttandirtt (extudinf loant held '01 ule and loan 11 lair value), client depositt and other ihird ojriy liabilities, and AUC are bated predominantly on the rjuiiwr.il <http://rjuiiwr.il> t ol Hie cUem
(hi Client deuosrtt and oilier Iftird parly liabilities pertain lo ihe Treasury

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COMMERCIAL BANKING

r CorrtmertlalBankint;deliversextensive industry ;'.*V ll khcrwledge, local expertise and dedicated service toi' 1 , ■ U.S.'and U.s/muiiinatiijr)jl ^
r- corporations, municipalities, financial institutions and -■ ; nohproritentitieswirA
*' ranging from'$ 20 million to ti bMlbn:Inadditrori,ca j.
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Selected income statement data
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Tear ended December 31

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Total nel revenue'"

Provision tor credit tosses Noninterest expense

Nonconitvnsrttion eipense
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TetafnonmreresT expense

4.237 3.562 1.580 1.371

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m adjust menu from inrom designated rommun'ty l in qi.il <http://qi.il> ilied busineilel in ■e ronimunidei nwcll iHJ< ei«npl mionic rented 10 mu" .ini, activities 0(1505 million (493 million and 1462 millini e.Tded Oecember Ji, 7016 2M5 and 701*, respectively

2016 compared with 201S
Ne; income was (2 7 biilion an increase ol 21% compared wuh the pno' year, driven hy higher nei revenue and a lower provision for credit losses, partially oflsei hv highi-i nnntriieresi expense

Net revenue was (7 5 billion, an increase of B% compared with the pnor year Net mieresi income was (5 l hillion, an increase of 14% compared with lhe pnpr year, driven by higher loan balances and deposit spreads Noninterest revenue was (2 3 billion, a decrease of 2% compared with the prior year, largely driven by lower lenriing-and-deposil-retatcd fees and other revenue, partially oflset by higher investment banking revenue

Nomnteresi expense was (2 9 billion, an increase ot 2% compared with the prior year, reflecting increased hiring of bankers and business-related support staff and investments in technology

The provision for credit losses was (?6? million and (442 million lor 2016 and 2015, respeciively. with both periods driven by downgrades in the Oil 4 Gas portfolio and select client downgrades in other industries.

2015 compared with 2014
Nel income was (2 2 billion, a decrease of 17% compared with the prior year, driven by a higher provision lor credit losses and higher noninterest expense

Not revenue was (6 9 billion, rial compared with the prior year Net interest income was (4 S billion, flat compared with the prior year, with interest income from higher loan balances offset by spread compression. Noninterest revenue was (2 A billion, flat compared with the prior year, with higher investment banking revenue offset by lower lending-related fees

Noninterest eipense was (2.9 hillion, an increase of 7% compared with the prior year, reflecting investment in controls.

The provision for credit losses was (442 million, reflecting an increase in the allowance for credit fosses for Oif & Gas exposure and select client downgrades in other industries. The prior year was a benefit of (189 million

IPMorgan Chase S CoJ?016 Annual Renor; iPHorian Chcse 8 C0./2Ol6 Annual Report

Management's discussion and analysis

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'Lending mdudes a variety ot finahcinfi alternatives.' which /
are "prirnariry provided on a'seared bast ^.collateral: \ ■.
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ffi^he^■■sets^prroducts' include term Jrjinsyievbhrmg li■●s W£ •credit: briii^firianctrrg. asset-based struaures, leases, and ʰswndby letters of tvediL'^^tos^lfiW*Tf'■! ■.■'■■;■.'■"■"■
'Treasury services includes revenue from a broad range of'
'. products and services lhat eoable' Ctl dients to manage. v':;'i
ipavrri^i ate rec^yx well** irrvesi arid managr funds.*

ᵇ Investment banking includes rrsrenuc from a range ol;;*^;. productsproyidin£CBdientswithsbphrsticatedcapitaJ-.;'"! ,ra>sirt£ allerrialfeesj as well as" balairo sheet arid /rsk \ 'nunagFmenl tints trupu^'acMsofY" equity iinderwritirig,", -andktan^Tidicalions:Rewnueli'omf^d>airjomeahtl»-1\ Equity Uartets products used try CO'cfierits ts'aho incfuded: Irrvesimetiti^ninngreveni^
leven'uc related to Hw^rnent banking r^biJiicu soM fo CD.

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CB is drvhied into four r^nwy dient segments: Middle •'-. Market yJwkj^C&nmteattrit Ba^Wr^'CorrrmeTClali.', Term't^nd"njfi'afl"dfle*(iiW e*iifa"ntWr:-V>-*£'
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Middle Market tonUng covers coiporate.'muiwpal and :"'
no'npiofit clients, with"annual revenue generally' ranging".'"
■between $20inniiori'and$500milu«n^^ ~
:sl-.^5^;: : - - :■ ■' ■: iiaj»rV"*:^**?^ '.»■"■■"■':" ;corrjorale Client Banking rivers dients with annual .'■ -reiwrw genially rangii^terweri'JSOO'flitllw t2·: ■ billion'and focuses on tlterits that have broader.irrrtsimenr/-;

Cr>mfli«fTJal Term tetiding primarily pwioes terrn ■ f *-.*.V. firarjang Id real estate ihv^ multifamily;;';?'-fproperties as well as ofHce; rMail and industrial properties.^
j:. i, ..■"■';<;.'.' .'f"-'^.V.'^n^;;;"i^^KV." ■.-'■,'>"- '>"» Real Estate Banking provides tutl^rvice banking to .': invt^c^ and'devcloriers of iirstltuborul-grade real estate ;. fcivwtmerrt:pr"o^ties-.y'r«"^^. '^;.l"-j^::.',"-'r-:,- V*. CnjW.ivimanfy tndudes lending and m^t'rnttit-feUtod ' . activrlies within the Community Development Banking business.'-'-'" .- ·'\v 5'^·;^·»y^^i?V;:' l

Selected income statement data (continued)

11.795 2,797
IS 479
2.581

* 2oi*;-^:-j /ois';-;

Revenue by product treasury services

Total Commercial fj
i 7.451 16.885 1 6.882
12.885
2.192 1,408
12,706 2.184
1.27S
e.gms*¹ (2.286 (2 179 11 98b
1 2.765 2 134

Revenue by client segment** UvJdW- uarxei Banbne Corporate Client ttanking Commercial Term Lending Real Estate Banking Othei
Total Commercial Banking net
(7,451 (6.885 16 882
19

Financial rains Overhead ralio
19

(a) includes tail tirm menue Irom investment banking products solo lo Co
die res. net ol revenue thannt wit!! the CiB (til twesenls total rrrm revenue from mvesrmenr barfing imducti iii le re

(c) Certain clients werr 1-aetlerred Irom Uiddie ua'til lanking 15 Corporate Client DankiniandliDmReal Ltlate narUng to Corpcrate Client tunl;nj dur ing 2016 Prior ueriod rhc-il lerjmer.t amounIS «ere rev-sed 1u conlnrrr ■ill- (he curreni perinrj presentation
201S1'"'ⁱ.'ˉⁱ-»1* •

Selected metrics (continued)
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1 214.141 1 200,700 1 195.267
i 188.9*5 % 167.641 188.67) 166 939
188,261 167.374

loans at lair value
Total loant
53.931 43,025 71,74* 14.722 6,068
S0.040 10.564 S4.038 9,024 4.840
50.502 37.708 62.860 11.234 5.337

Cuimon equity Period-end loans by client

Middle Market Banking Corporate Client Banking Commercial Term Lending Real d-Jte Banking Other
1 141.764 140.390
1 179,391 178,875
(15T.BS1 156.97S
Total Cemmeixlal unking
191.519 14.000
204.017 14.000
Total loans
50.316 14.495 58.135
50.076 27.73? ii.iiQ 8.324 4.512
(2.244
41,754 46.700 13.061 5,612
Average loans by client

Average loans by client

Kiddle Market funxir.g Corporate Clic-n: DanSmg CMnmerciaJ Term (.enAng Real Estate (janking Other

Selected metrics (continued)

As of or lor the year ended l i
December 3l.'(m m
raiNS) K:f "

Credit data and Quality statistics Net ct«rge-ci(rs/(rKoveriesl

Nonaccrual loans: Nonacrrual Icons irtjineri

Toal nofucmul loans

Total nonperforming assets

Aliowancn for credit losses. Allowance lor loan losses

Tetal allawanca for credit lcrstcs Net chaice olt/dtaivery) rale"

(a) An aliowinte lor loan lossesoltis^ m was held againsl nonaccrual loins retai and ZO14. respectively
(bl Loans held lor-sah and loans al lair val the net charg>'Ot(/(recovery) rate.

1 179,393 1 157.881 1 141 764

(a) Certain clients were trantlerred l.-om HJrjlv Uarkcl linking to Corporate Client Bankinf aid I mm Real Estate Ranking 10 Coronate Client Banking during 7016 Prior pernd client segment amounts awre rrnitd loconlurrn with tne cunrr.t period presentation

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Management's discussion and analysis

ASSLT fi WEALTH MANAGEMENT
him

Atiet 1 wealth Management, with dlent assets or $2.5 trillion, 'is a global leader In' investment and wealth management. AWM clients include Institutions, high;' ', i net-worth Individuals and retail investors to many '.-J: • major'martetsthnwghDUt the'w^d.'AWM offers,' * invKCnml management arjrws" most major. «s"t ' \\ ; '1 classes including equities; fixed lkotthx alxerriatiws] and money market funch.'AWU also offers'multi-asset V^. investment management,'providing«lutlMis fi^ a'.; :

; Mi'iiagemenulients? AWM^alsolpravidM retirement.'.' pr&utti'and senice^'brokerage'M :jncluding trusts and ^
*'dep<Ki&Th^^* *iris "Vy*
actively managed portfolios, i '. I V,-~.!.'.,'. . !

Selected income statement data
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TM,i nci revenue

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it noninteresl eipense

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Revenue bv line of bus Asset Management we«iih Management

21.0*2 2.504

19.735 2 B36

Return on common eauitv Ovcrmad ra:« Pre tat margin ratio-Asset Manage meni health Management Asset 1 wealth

Heedcourt

lumber of client advisors

2016 compared with 201 5

Net income was 3 rjillmn an increase ol 16% compared with the prior year, reflecting lower nonnnerest eipense pdtnallv offset by lower nei revenue

Net revenue was 112 0 biition a decrease ol 1 % Net mieres; income was J3 0 billion, up) f% driven by rusher deposit and loan spreads and loan growth noninterest revenue was $9 0 billion, a decrease of f>% lellecting the impac t of lower average equity market levels, a reduction in revenue related to tne disposal ol assets at the beginning ot 2016. and lower perlormance fees and placement lees

Revenue from Asset Management was 16 0 billion, down 5% from the prior year, driven hy a reduction in revenue related to the disposal of assets at the beginning ol 203 6. the impact of lowei average equity market levels and lower peiformance fees Revenue from weolth Management was $6 1 billion, up 4% from the pnor year, reflecting lught-net interest income from higher oeposn and loan spreads and continued loan growth, parlia'lv offset by the unpad ol lower average equity market levels and lower placement lees

Noninterest expense was (8 5 billion, a decrease of 5%. predominantly due to a reduction in expense related to the disposal or assets at the beginning of 2016 and lower legal expense.

2015 compared with 2014
Net income wasjl 9 billion, a decrease of 10% compared with the pnor year, reflecting higher noninterest expense, predominantly offset bv higher net revenue

Net revenue was (12.1 billion, an increase ol 1% Net interest income was $2 6 billion, up 5%. driven by higher loan balances and spreads Noninterest revenue was $9 6 billion, flai from last year, as net client inflows into assets under management and the impact of higher average market levels were predominantly offset by lower performance fees and the sale of Retirement Plan Services (-RPS") in 2014

Revenue front Asset Management was (6 3 billion, flat from the prior year as the sale of HPS in ?01 4 and lower performance fees were largely offsci by net client inllows Revenue from Wealth Management was 15 S billion, up 2% from the prior year due to higher net interest income from higher loan balances and spreads and net client inflows, partially offset by tower brokerage revenue

Noninterest expense was 18 9 billion, an increase of 4%, predominantly due to higher legal expense and investment in both infrastructure and controls

, AWU's lines of busmen consist of the following: Aoef eunacement proveJei lomprenensive global investment.
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lrvdur^eivefinynl man^temri. capital nulrtets and ^ lert'tii ainii estate pUiwlg.barte"! fending and;';*.J' ..*J styt~li ; iy wea i i n ^adyqory' serv k "J-^ _ *: -' - . -.'i

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Total allowance lor credit

Net charge-off rate Allowance for loan losses to period end loans
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Allowance for loan losses to nonaccrual loans

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Management's discussion and analysis

Client assets

2016 compared with 2015
Client assets were S2.5 trillion, an increase of 4% compared with the prior year. Assets under management wertj $i 8 trillion, an increase of 3% from the prior year *reflecting inflows into both liquidity and long-term products* and the effect of higher market levels, partially offset by asset sales at the beginning of 2016.

2015 compared with 2014
Client assets were S2 4 trillion, a decrease of 2% compared with the prior year Assets under management were Si 7 trillion, a decrease Df 1 % from lhe prior year reflecting the effert of lower market levels, partially oflset by net inflows to long-term products.

Client assets
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et and alternatives
Total asseti under management
Assets by dwnt m Private Banking
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Client assets (continued)

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Ending balance, December 11

Client assets routorward Deginmng balance Net asset Hows Market/performance/other in
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International metrics

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Assets under management Curope/MidrJle East/Africa Asia/Pacilic
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Total assets under management 1 1,771 1

Client assets
Europe/Middle tasl/Alnia 1 159 1
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Latin Amerca/Caribbean 114
Total international client assets 650

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Selected income statement data
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Total net income/!loss)
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Core toans*[1] Headcount

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a) Included m equivalent atfjuslmenis piedfimininUy due ro tai-e ira.ume Iron munlcipi.' bond investmeras Of ft8S million. 1839 *-d 1730 million lor lhe years ended nerembei Jl, 7016. 2015 2014. respectively
b) inched legal eipense/tbencll) ol 1(385) million. 1832 million milhor fo- the yean ended necemhe-11. zoi6. ?0is and ?Gli

2016 compared with 201S
Net loss was $704 million, compared with net income of $2.4 billion in the prior year

Net revenue was a loss of $487 million, compared with a gam of $267 million in the prior year The prior year included a $514 million benefit from a legal settlement

Net interest income was a loss of $1 4 billion, compared with a loss of $533 million in the prior year. The loss in the current year was primarily driven by higher interest expense or long-term debr and lower investment securities balances during the year, partially offset by higher interest income on deposits with banks and securities purchased under resale agreements as a result of higher rates

Noninterest expense was $462 million, a decrease of $515 million from the prior year driven by lower legal expense, partially offset by higher compensation expense.

The prior year reflected tax benefits of $2 6 billion predominantly from the resolution of various tax audits.

2015 compared with 2014
Net income was $2 4 billion, compared with net income of (864 million in the prior year.

Net revenue was $267 million, compared with $12 million in the prior year. The current year included a (514 million benefit from a legal settlement Treasury and CIO included a benefit of approximately (178 million associated with recognizing the unamortized discount on certain debt securities which were called at par and a (17 3 million pretax loss primarily related to accelerated amortization of cast) flow hedges associated with the exit ot certain non-operating deposits. Private Equity gams were $1.2 billion lower compared with the prior year, reflecting lower valuation gains and lower net gains on sales as the Firm exits this non-core business.

Noninterest expense was $977 million, a decrease of $182 million from the prior year which had included a $276 million goodwill impairment related to the sale of a portion of the Private Equity business

The current year reflected tax benefits of $2.6 billion predominantly from the resolution ot various tax audits compared with tax benefits of $1.1 billion in the prior year

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JPMorgan CtiKe A Coi2016 Annual Report
Management's discussion and analysis

Treasury and CIO overview
1 reasurv and CIO .ire predominancy responsible lor measuring monitoring repoiting anc managing Uic Firm s ncuitlitv funrtir.j: ,tnrj siruciur.il <http://siruciur.il> interest ia:e and foreign exchange nsks. as well as executing [tic-1 mi 5 capital dl.hi <http://dl.hi>Trie nsks managed by Treasury and 00 arise Irom the activities undertaken by the l irm's lour major reportable business segmems 10 serve itieir respective client hases which geneiaie both on- and off-balance sheet assets and liabilities

Treasury and CiO achieve the rirm's assei-liahilny i management objectives generally bv investing in high ^ duality setuniies that are managed foi the longer-term as pan ol the Firm's investment securities portfolio Treasury and DO also use tlenvatives to meet the Finn's asset-liahilily management objectives Toi further information on derivatives, see Note 6 The investment securities portfolio primarily consists ol U S and non-U S government securities, agency and nonagency mortgage-backed securities, other ABS. corporate debt securities and obligations of ll S states and municipalities. At December 31. 2016, the investment securities portfolio was $286 8 billion, and the average credit rating of the securities comprising the portfolio was aa* (based upon external lanngs where available and where not available based primarily upon internal ratings thai correspond to ratings as defined by S&P and Moody's) Dunng 2016, the Firm transferred commercial mortgage-backed securities and obligations of U S. stales and municipalities with a fair value ol $7 5 billion Irom available-for-sale ("AFS") to held-to maturity ("htm"). These securities were transferred ai fair value The transfers reflect the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on accumulated other comprehensive income CAOCD

Sec Note 1 ? for further information on the details of the Firm's investment securities portfolio Tor further mlormation on liquidity and funding risk, see Liquidity Risk Management on pages 110-115 Tor information on interest rate, foreign exchange and other risks. Treasury and CIO vaR and the Firm's earmngs-at-nsk, see Market Risk Management on pages 116-123.
Solened income statement and balance sheet data

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Private equity portfolio information'"

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2016 compared with 2015 The carrying valje ol the private equity portfolio at December 31. 2016 was $1 8 billion, down from $2 1 billion at Oecemher 31. 2015. driven hy poillolio sales

2015 compared with 2014 The carrying value of the private equity poi tfoho at Oecembei 31. 20IS was $2 l billion, down from $5 9 billion al December 31. 2014. driven by the sale ol a portion ot the Private Equity business and porfofio sales

ENTERPRISE-WIDE RISK MANAGEMENT

Risk ij an inherent part of JPMorgan Chases business activities when the l irn e*icnds a consumer or wholesale loan advises customers o-i iheir investment decisions, makes markets in securities, or o'ler> oilier products or services. Ihe Firm takes on some degree ol risk The l irm's overall objective is to manage its businesses, and the associated risks, m a manner that balances serving the interests ol Ms clients customers and investors and protects th'j saleiy and soundness ol the F irm

f irmwide Risk Management is overseen and managed on an enterpn>t?-wide basis The rum's approach to risk management covers a broad spectrum o! eronomir and other core nsk areas, such as credit, market, liquidity, model, principal, country, operational, compliance, conduct, legal, capital and reputation risk, with controls and governance established for each area, as appropriate

the Firm believes that effective risk management requires

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm.
- Ownership ol risk identification, assessment, data and management within each of the lines of business and corporate functions, and
- Firmwide structuics for risk governance

The Firm's Operating Commiiiee. which consists of the Finn's Chief Executive Officer ("CtO"). Chiel Risk Officer t"C.f)0"). Chief Operating Officer ("COO"), Chief Financial Officer ("CFO") and other senior executives, is the ultimate management escalation point in the Firm, and may refer matters to the Firm's Board of Directors The Operating Committee is responsible and accountable to the Firm's Ooard of Directors

The Firm strives lor continual improvement through efforts to enhance comiols. ongoing employee training and development, talent retention, and other meiiv.ues The Firm follows a disciplined dnd. balanced compensation framework wuh strong internal governance and independent Board oversight Tne impact of risk and control issues are carefully considered in the Turn's performance evaluation and incentive compensation processes

JPHor Ban Chase (Cc/201A Annual Report

Management's discussion and analysis

The following sections outline the key risks that are inherent in the Firm's business activities.

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Governance and oversight

The Firm's overall appetite for risk is governed by a "Risk Appetite" framework The framework and the Firm's risk appetite are set and approved by the Firm's CEO. CFO, CR0 and COO. LOO-level risk appetite is set by the respective LOB CEO, CFO and CRO and is approved by the Firm's CEO, CFO, CHO and COO. Quantitative parameters and qualitative factors are used to monitor and measure the Firm's capacity to lake risk against stated risk appetite Quantitative parameters have been established to assess stressed net income, capital, credil risk, market risk, structural interest rate risk and liquidity risk Qualitative factors have been established for select risks Risk Appetite results are reported quarterly to the Board of Directors' Risk Policy Committee ("DRPC")

The Firm's CRO is the head of the independent Risk Management ("IRM") function and reports to the CEO and the ORPC. The CEO appoints the CRO lo create the Risk Management Framework subject to approval by the DRPC in the form of the Primary Risk Policies The Chief Compliance Of licer ("CCO"). who reports to the CRO. is also responsible lor reporting to the Audit Committee for the Global Compliance Program. The Firm's Global Compliance Program focuses on overseeing compliance with laws, rules and regulations applicable to the Firm's products and services to clients and counterparties

The IRM function, comprised of Risk Management and Compliance Organizations, is independent of the businesses The IRM function sets various standards (or the risk management governance framework, including risk policy, identification, measurement, assessment, testing, limit setting (e g. risk appetite, thresholds, etc), monitoring and reporting Various groups within the IRM function are aligned to (he LOBs and to corporate functions, regions and core areas of risk such as credit, market, country and liquidity risks, as well as operational, model and reputational risk governance

The Firm places key reliance on each of its LOBs and other functional aieas giving rise to risk. Each 10B or other functional area giving rise to risk is expected to operate its activities within the parameters identified by the IRM function, and within their own management-identified risk and control standards Because these LOBs and functional areas are accountable for identifying and addressing the risks in their respective husinesses and lor operating within a sound control environment, they are considered the "first line of delensc" within the Firm's risk governance framework

The Firmwide Oversight and Control Group consists of dedicated control officers within each of the lines of business and corporate functions, as well as having a central oversight function The group is charged with enhancing the Firm's control environment by looking within and across the lines of business and corporate functions to help identify and remediate control issues. The group enables the nrm to detect control problems more quickly, escalate issues promptly and engage other stakeholders to understand common themes and interdependences among the various parts of the Firm.

As the "second line of defense", the IRM function provides oversight and independent challenge, consistent with its policies and framework, to the risk-creating LOBs and functional areas

Internal Audit, a function independent of the businesses and the IRM function, tests and evaluates the Firm's risk governance and management, as well as its internal control processes This function, the "third line of defense" in the risk governance framework, brings a systematic and disciplined approach to evaluating and improving the effectiveness of the Firm's governance, risk management and internal control processes The internal Audit Function is headed by the General Auditor, who reports to the Audit Committee.

The independent status of the IRM function is supported by a governance structure that provides for escalation of nsk issues to senior management, the Firmwide Risk Committee, or the Board of Directors

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Management's discussion and analysis

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The Directors' Risk Policy Committee of the Board oversees the Firm's global risk management framework and appioves the primary risk management policies of Ihe Firm The Committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage the Firm's risks, and its capital and liquidity planning and analysis Breaches in risk appetite, liquidity issues that may have a material adverse impact on the Firm and other significant risk-related matters are escalated to the Committee

The Audit Committee of the Board assists the Boaid in its oversight of management's responsibilities to assure that there is an effective system of controls reasonably designed to safeguard the assets and income ot the Firm, assure the integrity of the Firm's financial statements and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations in addition, the Audit Committee assists the Board in its oversight of the rirm's independent registered public accounting firm's qualifications, independence and performance, and of the performance of the Firm's Internal Audit function

ihe Board of Directors provides oversight of risk principally ih rough ihe ORPC, Audit Committee and. with respect to compensation and other management-related matters, Ihe Compensation S Management Development Committee Each committee of Ihe Board oversees reputation risk issues within its scope of responsibility

The Compensation & Uanagcment Development Committee CCUDC)assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy, incentive compensation pools, and compensation practices consistent with key business objectives and safety and soundness The Committee reviews Operating Committee members' performance against their goals, and approves their compensation awards The Committee also periodically reviews Ihe Firm's diversity programs and management development and succession planning, and provides oversight of the Firm's culture and conduct programs.

Among the Firm's senior management-level committees that are primarily responsible for key risk-related functions are.

The Firmwide Risk Committee CFRC) is the Firm's highest management-level risk committee. It provides oversight of the risks inherent in the Firm's businesses The Committee is co-chaired by the Firm's CEO and CRO This Committee serves as an escalation poini for risk topics and issues raised by its members, the Line of Business Risk

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Comiiiitl'.'eS. f irmwide Control Committee Tn mwiOe Fiduoary His* fi()veniiic:e Committee, a no" 'egional Fiisk Cinr.n ii tines, as approbate. I he Committee escalates significant issues tu ;:ie DRPC as appropriate.

the I irtnvsido Control Committee t'FCC'l provides a forum lor senio1- management lo review and discuss firmwide npera'.ional risks including existing ano emerging issues, and operational i isk metrics, and to review operational risk rridiidiji'ineni execution in the rontext of Hit Operational Risk Management Framework ("ORMF'j wlucli provides the framework foi the governance, assessment, measurement, and monitoring and reporting of operational risk The FCC is co-chaired bv the Chief Control Officer and the Firmwide Risk Faeculive lur Operational Risk Governance The committee relies upon the prompt escalation ol issues from businesses and functions as the primary owners of (he operational risk Operational risk issues may be escalated by business oi function control committees to the FCC. which may. m turn, escalate to the FRC, as appropriate.

The f-iimwide Fiduciary Risk Governance Committee is a forum for risk matters related lo the Firm's fiduciary activities The Committee oversees the firmwide fiduciary nsk governance framework, which supports the consistent identification and escalation of dduciai v risk issues by the relevant lines of business, establishes policies and best practices to effectuate the Committee's oversight responsibility, and cieates metrics reporting to (rack fiduciary activity and issue resolution Firmwide The Committee escalates significant fiduciary issues to ihe TRC. the DRPC and the Audit Committee, as appropriate

Line of Business and Regional Risk Committees review the ways in which the particular line of business or Ihe business operating in a particular region could be exposed to adverse outcomes with a focus on identilymg. accepting, escalating and/or requiring remediation of matters brought to these committees These committees may escalate lo the FRC. as appropriate LOB risk committees are co-chaired by the LOB CEO and the LOB CRO Each LOB risk committee may create sub-committees with requirements for escalation The regional committees are established similarly, as appropriate, for the region

In addition, each fine of business and function is required to have a Control Committee. These control committees oversee the control environment of their respective business or function. As part of that mandate, they are responsible for reviewing data which indicates the quality and stability ol the processes in a business or function, reviewing key operational risk issues and focusing on processes with shortcomings and overseeing process remediation These committees escalate to the FCC, as appropriate.

The Firmwide Asset Liability Committee ('ALCO'), chaired by the Firm's Treasurer and Chief Investment Officer under the direction of the COO. monitors Ihe Firm's balance sheet, liquidity risk and structural interest rate risk ALCO reviews the Firm's overall structural interest rate risk position,

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'uniting leuuirements and strategy and securitization p.'orjMms (and any required liquidity Support by the Firm of Such ti:ogiains) ALCO r; responsible for reviewing and approving tne I irms r0rirJs Transfer Pricing Policy (through which lines of business 'transfer" interest rate risk to Ticasur v and CIO) and the Firms intercompany Tumling and Liquidity Policy AKO is also responsible lor reviewing Hie Firm's Contingency Funding Plan

The firmwide Capital Govei name Committee chaired by the tiead of the Regulatory Capital Management office is responsible for reviewing the Firm's Capital Management fohcy and Ihe pi maples underlying capital issuance and distribution alternatives and decisions The Committee oversees the capital adequacy assessment process, including the overall design, scenario development and macro assumptions and ensures lhat capital stress test programs are designed to adequately capture the risks specific to the Firm's businesses. Ihe f mnwide Valuation Governance Forum ('VGF') is composed ol senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm The VGF is rhaned by the firmwide head of the Valuation Control Group ("vCG") (under the direction of the Firm's Controller), and includes sub-forums covering the Corporate & Investment Bank. Consumer & Community Banking. Commercial Ranking, Asset ft Wealth Management and cer tain corporate functions, including Treasury and CiO

In addition, the JPMorgan Chase Bank, n a Board ol Directors is responsible (or the oversight of management ol the Bank Ihe JPMorgan Chase Bank. N A. Board accomplishes this function acting directly and through (he principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N A is primarily the responsibility of the DRPC and Audit Committee of the Firm's Board of Directors and, with respect to compensation and other management related matters, the Compensation & Management Development Committee of the Firm's Board of Directors

Risk measurement

The Firm has a broad spectrum of nsk management metrics, as appropriate for each risk category For further mlormation on nsk management metrics, see table on key risks on page 72. Additionally, the Firm is exposed to certain potential low-probability, but plausible and material, idiosyncratic risks that are not well-captured by its other existing risk analysis and reporting metrics These idiosyncratic risks may arise in a number of ways, such as changes in legislation, an unusual combination of market events, or specific counterparty events. The rirm has a process intended to identify these risks in order to allow the Firm to monitor vulnerabilities that are not adequately covered by its other standard risk measurements

Management's discussion and analysis

CAPITAL RISK MANAGEMENT

Capital nsk is the risk the Firm has an insufficient level and composition of capital to support its business activities and associated risks during both normal economic environments and under stressed conditions

a strong capital position is essential to (he Firm's business strategy and competitive position Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative of the Firm's Board of Directors. CEO and Operating Committee. The Firm's balance sheet philosophy focuses on nsk-adjusted returns, strong capital and robust liquidity The Firm's capital management strategy focuses on maintaining long-term stability to enable it 10 build and invest in market-leading businesses, even in a highly stressed environment Prior to making any decisions on luturc business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view lo preserving the Firm's capital strength

The Firm's capital management objectives are to hold capital sufficient to

- Maintain "well-capitalized" status tor the Tirm and its principal bank subsidiaries,
- Support nsks underlying business activities,
- Maintain sufficient capital in order to continue to build and invest in us businesses through the cycle and in stressed environments,
- Retain flexibility to take advantage of future investment opportunities.
- Serve as a source of strength to its subsidiaries.
- Meet capital distribution objectives, and
- Maintain sufficient capital resources to operate throughout a resolution period in accordance with the Finn's preferred resolution strategy

These objectives are achieved through the establishment of minimum capital targets and a strong capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events The Firm's minimum capital targets are based on the most binding ol three pillars an internal assessment of the Firm's capital needs, an estimate ot required capital under the CCAR and Dodd-Frank Act stress testing requirements, and Basel III Fully Phased-In regulatory minimums Where necessary, each pillar may include a managemenl-cstablished buffer The capital governance framework requires regular monitoring of the rirm's capital positions, stress testing and 'defining escalation protocols, both at Ihe Firm and material legal entity levels

111.734 107,474 217,487 1,474,4*1 11.1*

The following tables present the Firm's Transitional and Fully Phased-In nsk-based and leverage-based capital metrics under both the Basel IM Standardized and Advanced Approaches The Firm's Basel ill ratios exceed both the current and Fully PhasetJ-in regulatory minimums as of December 31. 2016 and 2015. For further discussion of these capital metrics and the Standardized and Advanced approaches, refer to Monitoring and management of capital on pages 78-82.

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Management's discussion and analysis

Strategy and governance
Trip Finn s f.fc0 in lOftiunciion wnn the Board ol Direciors establishes principles and guidelines for capita: planning, issuance usage and distributions and minimum capital targets (or Hie level and composition ol capital in twin Business as-usual and highly stressed environments ine DR*C assesses and approves ihe capital management and governance processes ot the Firm The Finn's Audit Committee is ipsponsible for reviewing and approving ihe idpiial stress testing end-io-end control framework

The Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") support lhe Firm's strategic capital decision-making lhe Capital Governance Committee oversees lhe capital adequacy assessment process, including the overall design, scenario development anq macro assumptions and ensures thai capital stress test programs are designed to adequately capture the nsks specific to the Firm's businesses RCMO. which reports to the Finns CIO. is responsible for designing and monitoring Hie Firm's execution of its capital policies and strategies once approved hy the Board, as well as reviewing and monitoring Hie execution of its capital adequacy assessment process The Basel Independent Review function ("BIR"), which reports to the RCMO and has direct access to both (he ORpc and Capital Governance Committee, conducts independent assessments of the Firm's regulatory capital framework lo ensure compliance with the applicable U S. Basel rules m support of senior management's responsibility lor assessing and managing capital and for the DHPC's oversight of management in executing that responsibility For additional discussion on (he DRPC. see Fmerpnse-wide Risk Management on pages 71-75

MonKoi mo and management of capital in its monitoring and management of capital, the Firm takes into consideration an assessment of economic risk and all regulatory capital requirements to determine the level of capital needed to meet and maintain the objectives discussed above, as well as to support the framework for allocating capital to its business segments. While economic risk is considered prior to making decisions on future business activities, m most cases, the Firm considers risk-based regulatory capital to be a proxy for economic risk capital

Regulatory capital
The Fedeial Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company The OCC establishes similar minimum capital requirements for the Firm's national banks, including IPMorgan Chase Bank, N.A. and Chase Bank USA, N.A The U.S capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time.
H. nci in overview
Crfpnjl rules mirier Base! in t".ialiiivi minimum capital ratios .H'Kl overall capital adequacy standards lor large <nct m:ei nationally active u S Dark bending companies and hanks, un hiding tht Firm and its insured depository institution riD ¹") subsidiaries Basel in presents iwo comprehensive mpitiodologies tor calculating Rwa a general (standardized) approacn ("Basel in Standardized'], and an advanced approach ("Basel ill Advanced") Ceriam of the requirements of Basel ill arc subiect to phase-in periods thai Regan on January 1 20 l a and continue through the end ol 2018 ("transitional period")

Basel in establishes capital requirements for calculating credit risk and market risk RWA. and in the case ot Basel III Advanced operational risk Rwa Key differenccs in the calculation of credit risk RWA between the Standardized and Advanced approaches aie that for Basel tn Advanced, credit risk Rwa is based on nsk-sensitive approaches which largely rely on the use ol internal credit models and parameters, whereas for Basel in Standardized credit risk RWA is generally based on supervisoly risk-weightings which vary primarily by counterparty type and asset class Market nsk RWA is calculated on a generally consistent basis between Basel in Standardized and Basel m Advanced tn addition to the RWA calculated under inese methodologies, the Firm may supplement such amounts to incorporate management judgment and feedhark lrom ns bank regulators

Basel in also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate SLR Tor additional information on SLR. see page 82

Basef III Fully Phased-in
Basel in capital rules will become fully phased-in on January I, 2019, at which point (he Firm will continue to calculate its capital ratios under both the Basel in Standardized and Advanced Approaches The Firm manages each of the businesses, as well as the corporate I unctions, primarily on a Basel in Fully Phased-In basis For additional information on the Firm. IPMorgan Chase Bank, H A and Chase Bank USA, N A s capital. RWA and capital ratios under Basel 111

Standardized and Advanced Fully Phased-in rules and SLRs calculated under the Basel III Advanced Fully Phased-in rules, all of which are considered key regulatory capital measures, see explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 48-50

JPMorgan Chase * Co J 2016 Annual Report
2015
2017

The F-irms I'sliuuies ol us Basel m SMndaidized ,mri Advanced Fully Phased in capital Rwa and capital ratios and Si Hs lor the Firm. jPMortjan Chase Bank, n a and Chase Bank USA. N A are based ur the current published u S Basel in rules and nn ihe implication ol such rules to the t irm's businesses as currently conducted The- actual impact on the Firm's capital ratios and SIR as ol the
2016

Thfr Basel III rules include minimum capital ratio requirements lhat are Subiect to phase-in periods through the end of 2018. The capital adequacy or the Firm and its national bank subsidiaries, both during the transitional penod and upon full-phase in. ts evaluated against the Basel in approach (Standardized or Advanced) which results for each quarter in (he lower ratio as required by the Collins Amendment of the Dodd-Frank Acl (the "Collins Floor") Additional information regarding ihe Firm's capital ratios, as well as the U.S federal regulatory capital standards to which the Firm is subject, is presented in Note 28 For further information on the Firm's Basel ill measures, see the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http.// <http://http.//>■ n vest or.shareholder.com/jpmorganchasc/basel.cfm <http://or.shareholder.com/jpmorganchasc/basel.cfm>)

All banking institutions are currently required to have a minimum capital ratio of 4.5% of CETI capital Certain banking organizations, including the Firm, are required to hold additional amounts of capital to serve as a 'capital conservation buffer*. The capital conservation buffer is intended to be used to absorb potential losses in times of financial or economic stress If not maintained, the Firm could be limited in the amount of capital that may be

JPUorgan Chaw ■ CO./2016 Annual Bepoil
Capital conservation bulfei mcl GSI3
I- 1 C.SIB surcharge

effective naif* n! me rules may ciifler irom ihe Firm's curreo; estimates depending on manges the Firm may make to its businesses in the future, further implementation guidance f'om the regulators, and regulatory approval of certain of the rirm's internal risk models (or. alternatively, regulatory disapproval ol Ihe Firm's internal risk models lhat have previously been conditionally approved)

distributed, including dividends and common equity repurchases The capital conservation buffer is subject to a phase-in penod that began January l, 2016 and continues through the end of 2018

As an expansion of the capital conservation buffer, the Firm is also required to hold additional levels of capital in the form of a GSIB surcharge and a countercyclical capital buffer

Under the Federal Reserve's final rule, GSIBs, including the Firm, are required to calculate their GSIB surcharge on an annual basis under two separately prescribed methods, and are subject to the higher of the two. The first ("Method 1"), reflects the GSIB surcharge as prescribed by the Basel Committee's assessment methodology, and is calculated across five criteria: size, cross-junsdictional activity, interconnectedness, complexity and substit inability The second ("Method 2"). modifies the Method 1 requirements to include a measure of short-term wholesale funding in place or substitutability, and introduces a GSIB score "multiplication factor"

Management's discussion and analysis

The Firm's Fully Phased-In GSIB surcharge for 20) 6 was calculated io be 2.5% under Method I and 4.5% under Method 2. Accordingly, the Firm's minimum capital ratios applicable in 2016 include a GSIB surcharge of 1 125%, resulting lrom the application of the transition provisions to the 4 5% fully phased-in GSIB surcharge For 2017, the Firm has calculated its Fully Phased-In GSIB surcharge to be 2 5% under Method 1 and 3 5% under Method 2 resulting in the inclusion ol a GSIB surcharge of 1 75% in the Firm's minimum capital ratios after application of the transition provisions.

Tne countercyclical capital butter takes into account the macro financial environment in which large, internationally active hanks function On September 8, 2016 the Federal Reserve published the framework that will apply to the setting of the countercyclical capital bufler As of October 24. 2016 the Federal Reserve reaffirmed setting the U S countercyclical capital buffer at 0%. and stated thai it will review the amount at feast annually The countercyclical capital buffer can be increased if the Federal Reserve. FDIC and OCC determine that credit growth in the economy has become excessive and can be set at up to an additional 2 5% of rwa suhject to a 12-month implementation period

Based on the Firm's most recent estimate of its GSIB surcharge and f he current countercyclical bufler being set at 0%, the Firm estimates its Fully Phased-In CETI capital requirement, at January l, 2019. would be 10 S% (reflecting the 4 5% CEII capital requirement, the Fully Phqsed-m 2.5% capital conservation buffer and the GSIQ surcharge of 3.5%). As well as meeting lhe capital ratio requirements of Basel Ml. the Firm must, in order to be "wf"ii-capitalized", maintain a minimum 6% Tier I capital anq a 10% Total capital requirement. At December 31, 20i6 and 2015, JPMorgan Chase maintained Basel III Standardized Transitional and Basel ill Advanced Transitional ratios in excess of the well-capitalized standards established by the Federal Reserve Thd Firm continues to believe that over (he next several years, it will operate with a Basel Mi CETI capital ratio between ll%and 12.5% It ts the Tirm's intention that the Firm's capital ratios continue to meet regulatory minimums as they are fully implemented in 2019 and thereafter

tacti of the rirm's 101 subsidiaries must maintain a mirimum6 5%CCTI. 8% Tier} capilal, J 0% Total capital ant] 5% Tier I leverage requirement to meet the definition of -well-capitalized" under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA") for IDI subsidiaries

Capiraf

a reconciliation of total stockholders' equity to Basel in Fully Phased-in CETI capital, Her I capital and Basel in Advanced and Standardized Fully Phased-In Total capital is presented in the table below, ror additional information on the components ol regulatory capital, see Note 28.

254.190 76 061

Capita/ components

Qna»lJt»)i:;v.J-.^$^^^

Total n

less. Preferred stock

Common aodcfioUm' equity

Goodwin

3.230 1.468

Other intangible assets

Deferred tax liabilities'" ts. Pita CF.11 <http://CF.11> capital adjirs:n

StandArduvjdVAdvanced CETI capital

Prefer red stock

Other Tier 1 adjustmenis™

Standardued/Advanced Tier I capita

Qualifying allowance lor credit losses Other

standard-fed Futiy Phased-In Tier 2 capital

StanrJanlued Fully rtiased-in Total capital

224.S26

for credit lone* for

Advanced Fully Phased-In Tier I capital

Advanced Fully Phased-In Total capital

(a) Represents deferred tai tiabiliiies related to :a(-deductitie goodwill and to irieiKiliable intangibles treated in nontaxable transitions, which lie netted against goodwill and other intangibles when calculating TCt

ID) includes tne deduction associated ■cm the permissible holdings o(covered lunds (at defined by the Meter Rule) acquired after Decembei 31.2013 The deduction was not material as ol Decembei 31.2016

The following table presents a reconciliation of the Firm's Basel III Transitional CETI capital to the Firm's estimated Basel in Fully Phased-In CETI capital as of December 31. 2016.

flntrflBojisly j■	*■■ʲ [■■,*
Transitional CETI capital	t 1*2,967
111,734	
AOCi phase-in [1**] (1S6)	
CCTi capital deduction phase-in* (695)	
intangible asms deductnn phase-in	[10] (3121
Other adiustmertstoCEM capital-	(70)
Fully Phased-In CLT1 capita]	

a) Includes lhe remaining balance ol AOCI related to AFS debt securities and defined benefit pension and other postretirement employee benefit rOPtR") plans mat will Quality as Basel in CETI capital upon full pnase-in
b) Fredominanily includes regulatory adjustments related lo changes in OVA. as well as CETI deductions lor defined benefit pension plan assets and del erred tax assets related to nel operalinc loss CNTJi") and tax ciedit carryforwards.
c) ftclaies (o intangible assets, other ilian FjoocfwiU and HSRv. that are required to be deducted fromCEI 1 capital upon full phase-in.
d) includes minority interest and the l irm's investments in Its own CET1 Capital instruments.

Capital rollforward

The following table presents the changes in Basel m Fully Phased-In CETI capital. Tier 1 capital and Tier 2 capital for the year ended December 31, 2016

23.0S6 (6.912) (7.163) 1*73) (1.280) 9S4

Tear fnded Decanter 71. (m ewfcro}

SlwrJardized/AdvancedCT.Tl capital at December 31.2015 $ 173,18°

Net income applicable to common equity Dividends declared on common stock Net purchase of treasury stock Changes in additional put-In capital Charccs related to ADO* Adjustment related to DVA W Other

increase in Standardised/Advanced CETl capital

Change in CET] capital

Nel issuance of noncumutatn* perpetual preferred stock

Other

increase in Standardised/Advanced Tier I capital

Standardized Tier 2 capital it December 31.2015

Chang* in qualifying allowance for credit losses Other

increase tit smUardired Tier 2 apiti

Standard lied Tier Z capital at December 31,2016 Standardised Total capital at December 11, zoii Advanced tier 2 capital at December 31, 2015

Chance ki qualifying allowance lor credit losses

Increase in AA-ancrd Tier 2 capital	(2.0(101
Advanced Tier 7 capital it December 31,2014	% 19.052
Advanced Total capital n December 31,2016	i 276,526

(a) Effective January 1.2016, the adjustment reflects lhe impact of the adoption of OVA through OCI For further discussion of the accounting change refer to Mote 2S

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Management's discussion and analysis

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lOittai nwtl The loi lowing table presents cnjfiljes ir the year ended Dcceinoer 31 20in Tt clnver ol the Chang'!

SUMtVdUMI

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Model t data clunges ·fOrtfolio runoll* Movvmml in porjfoholi;

December 11 2016

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The following table presents the components ol the Firm's Fully Phased-in SLR as ot Decembei 31. 2016

Sunolememary leverage ratio

Fully Phased-in Tier 1 Capital

2 S3.I.4S/ 46 077

I otJ adjusted aver ace asms" 0ll oalance ■Jwri e<posures"

5m leverage elposure

SLR

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The SLR is defined as Tier 1 capital under Basel in divided bv the Finn's total leverage expusure Total leverage exposure is calculated by taking (he Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-halance sheet exposures, such as undrawn commitments and derivatives potential future exposure u $ bank holding companies, including the Firm, are required to have a minimum SLR ol 5% and lDt subsidiaries, including JPMorgan Chase Bank, N A and Chase Bank USA, N A., are required to have a minimum SLR of 6%. both beginning January l, 2018. as of December 31, 2016. the Firm estimates that JPMorgan Chase Bank. N a's and Chase Bank USA. N.A's Fully Phased-in SLRs arc approximately 6 6% and 9 6%. respectively

Line oi business equity

ihe Finn s ii.imework lor allocating capital to its business segments (line of business equity) ■$ based on the following objectives

- inu'f.rdie hrmwide and line of business capital management activities.
- Measure performance consistently across all lines of business, and
- Provide comparabtlily with peer firms for each of the lines of business

I ar.ii <http://ar.ii> business segment is allocated capital hy taking into consideration stand-alone peer comparisons and regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-in) For 2016, capital was allocated to each business segment for, among other things, goodwill and oihei intangibles associated with acquisitions effected bv the line of business ROt is measured and internal targets tor expected returns are established as key measures of a business segment's performance

Line of business common equity

*rr * rwrmumfy JUnking*	*f>*	*Sl 05*	*Sl 0} b.*
Corporate t Investment Bank		44.0	62 0 hi
Cririinieicul Banking		16.0	14 0 |<
assei A Wealth Management		*f 0*	*10* '
Corporate	64 6		72 4
Total c in stockholders' tquity	l 224 6	1 215 7	1 207 4

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital Through the end of 2016. capital was allocated to (he lines ot business based on a single measure. Basel III Advanced Fully Phased-in RWA Effective January 1. 2017, the Firm's melhodotogv used to allocate capital to the Firms business segments was updated The new methodology incorporates Basel in Standardized Fully Phased-in rwa (as well as Basel III Advanced Fully Phased-in RWA). leverage, the GSIB surcharge, and a simulation ol capital in a severe stress environment The methodology will continue to be weighted inwards Basel 111 Advanced Fully Phased-in RWA because the Firm believes it to be the best proxy for economic risk The rirm will consider further changes to its capital allocation methodology as the regulatory framework evolves, in addition, under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business The Firm will continue to establish internal ROE targets for its business segments, against which they will be measured, as a key performance indicator

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The table bcluw ;elteris Hie Finn's assessed level o' capital requi'cd lor each line of business as ol ihe dates indicated

Line of business common equity
(in 14
2TJI7
Z016

December)l.

2015

Consumer ft Community Banking	t 510	1 S10	1 510
(ivnorate fc invesimen: Bank	70 0	64 0	62 0
Commercial Banting	20.0	16 0	14 0
Asse: ft wealth Management	< j>	?0	* 0
Curpolale	78 1	BS I	85 S
tn stocfcheioerV	i 22B1	S 22BI	1 221 5

Planning and stress testing Comprehensive Capital Analysis and Review The Federal Reserve lequires large bank holding companies, including the Firm, to submit a capital plan on an annual basis The Federal Reserve uses the CCAR and Dodd-Frank Acl stress test processes to ensure that large BHCs have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place thai address each BHCs unique risks to enable them to absorb losses under certain stress scenarios Through the CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes ("ICAAP"). as well as its plans to make capital distributions, such as dividend payments or stock repurchases. On June 29, 2016, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2016 capital plan. For mlormation on actions taken by the Firm's Board ol Directors following the 2016 CCAR results, see Capital actions on page 84 The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process, as discussed below

Internal Capital Adequacy Assessment Process Semiannually, the Firm completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital The Firm's ICAAP integrates stress testing protocols with capital planning. The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses These scenarios are articulated in terms of macroeconomic factors, which are key dnvers of business results, global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm However, when defining a broad range of sccrunos, realized events can always be worse. Accordingly.

management considers additional stresses outside these scenarios, as necessary, icaap results are reviewed by management and the Board of Directors. Capital actions Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio. capital objectives, and alternative investment opportunities. On May 17. 2016, the Firm announced that its Board of Directors increased Ihe quarterly common stock dividend to (0 48 per share, effective with the dividend paid on July 31. 2016 The Firm's dividends are subiect to Ihe Board of Directors' approval at the customary times those dividends are to be declared.

For information regarding dividend restrictions, see Note 22 and Note 27

The following table shows the common dividend payoul ratio based on net income applicable to common equity.

*Vear ended December n:+:£f%ii-i:[L\$ 2016 *?»'■■■; 20 IS 2014*
Common drvriend payoul ratio jo% 28% ?9%

Common equity

During the year ended December 31.2016. warrant holders exercised their right to purchase 22 5 million shares of the Firm's common stock. The Firm issued from treasury stock 11 1 million shares of its common stock as a result of these exercises, as of December 31. 2016, 24 9 million warrants remained outstanding, compared with 47 4 million outstanding as of December 3i. 201 s On March 17. 2016, the Firm announced that its Board of Directors had authorized the repurchase of up to an additional 11 9 billion of common equity (common stock and warrants) through June 30, 2016 under its equity repurchase program. This amount is in addition 10 the $6 4 billion of common equity that was previously authorized for repurchase between April 1, 2015 and June 30, 2016 Following receipt in June 2016 of the Federal Reserve's non-otipection to the Firm's 2016 capital plan, the Firm's Board of Directors authorized the repurchase of up to (10 6 billion of common equity (common stock and warrants) between July 1. 2016 and June 30. 2017

This, authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plan.

As of December 31. 2016, $6 I billion of authorized repurchase capacity remained under the program

The following table sets forth the Firm's repurchases of common equity for the years ended December 31,20)6, 201S and 2014. There were no warrants repurchased during the years ended December 31, 2016. 201S and 2014.

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The Firm may, Irom time to time, enter into written trading plans under Rule 10bS-l of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program A Rule 10b5-l repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity - for example, during internal trading blackout periods All purchases under a Rule lObS-l plan must be made according to a predefined plan established when the Tirm is not aware of material nonpublic information

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions, legal and regulatory considerations affecting the amount and timing of repurchase activity, the Firm's capital position (taking into account goodwill and intangibles), internal capital generation: and alternative investment opportunities The repurchase program does noi include specific price targets or timetables, may be executed through open market purchases or privately negotiated transactions, or utilize Rule 1005-1 programs, and may be suspended at any time For additional information regarding repurchases of Die Firm's equity securities, see Part 11, item 5: Market for Registrant's Common rquity. Related Stockholder Matters and issuer Pjjj chases of Eouity Securities on page 2?. Preferred stock

Preferred stock dividends declared were (1 6 billion for the year ended December 31, 2016 For additional information on the Firm's preferred stock, see Note 22 Redemption of outstanding trust preferred securities The Firm redeemed $1 6 Oiffron and (15 billion of trust preferred securities in the years ended December 31, 2016 and 2015. respectively

Other capital requirements

TLAC

On December is. 2016, Ihe Federal Reserve issued its final TLAC rule which requires the top-tier holding companies of eight U.S global systemically important bank holding companies, including the Firm, among other things, to maintain minimum levels of external TLAC and external long-term debt that satisfies certain eligibility criteria ('eligible LTD") by January 1, 2019. The minimum external TLAC requirement is Ihe greater of (A) 18% of the financial institution's RWA plus applicable buffers, including its GSIB surcharge as calculated under Method 1 and (B) 7.5% of its total leverage exposure plus a buffer equal to 2.0%. The required minimum level of eligible long-term debt is equal to the greater of (A) 6% of the financial institution's RWA, plus its U S Method 2 GSIB surcharge and (B) 4 5% of the Firm's total leverage exposure. The final rule permanently grandfathered all long-term debt issued before December 31, 2016, to the extent these securities would be ineligible only due to containing impermissible acceleration rights or being governed by foreign law. While the Firm mav have to raise long-term debt to be m full compliance with the rule, management estimates the net amount to be raised is not material and the liming for raising such funds is manageable

Broker-dealer regulatory capital JPMorgan Chase's principal U.S. broker-dealer subsidiary is JPMorgan Securities Pnor to October l, 2016 the Firm had two principal U.S. broker-dealer subsidiaries. Effective October 1, 2016 JPMorgan Clearing merged with JPMorgan Securities JPMorgan Securities is the surviving entity in the merger and its name remain unchanged.

JPMorgan Securities is subject lo Rule 15c3-l under the Securities Exchange Act ol 1934 (the 'Net Capital Rule"). JPMorgan Securities is also registered as futures commission merchants and subject to Rule l.l 7 of the CFTC.

JPMorgan Securities has elected (0 compute its minimum nel capital requirements rn accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule At December 31, 2016. JPMorgan Securities' net capital, as defined by the Net Capital Rule, was 114.7 billion, exceeding the minimum requirement by $11 9 billion

In addition to its minimum nel capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $ 1.0 billion and is also required to notify the SEC in the event that tentative net capital is less than (5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule As of December 31, 2016, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J P Morgan Securities pic is a wholly owned subsidiary of JPMorgan Chase Bank, N.A and is the Firm's pnncipal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities J.P. Morgan Securities pic is jointly regulated by the U.K. PRA and the FCA J P Morgan Securities pic is subject to (he European Union Capital Requirements Regulation and the U K. pra capital rules, under which it has implemented Basel ill

At December 31, 2016. j p. Morgan Securities pic had estimated total capital of (34.5 billion, its estimated CETI capital ratio was 13.8% and its estimated total capital ratio was 17.4%. Both ratios exceeded the minimum standards of 4.5% and 8.0%, respectively, under the transitional requirements of the European Union's ("EU") Basel ill Capital Requirements Directive and Regulation, as well as the additional capital requirements specified by the PRA

CftbDII RISK MANAGEMENT

Cff-rjii tii*. is ;ne risk of loss anyig from ihe default ola cusiomer. client oi counterparty I he firm provides credit 10 4 variety ol customers ranging horn large cGrnoiate and ins:i:utional c hems to individual consumers and small hj'.messes In its consumer businesses, the fim is exposed lo credit risk primarily through us mortgage hankuij: cruCii card auto, business banking and student lending businesses Originated mortgage loans aie retained m the mortgage portlo'io. securitized or sold lo u b government agencies and ll S government-sponsored enterprises other tvr.es <http://tvr.es> of consumer loans are typically letamed on the balance sheet in us wholesale businesses the Firm is e*iiosed co credit nsk through its underwriting, lending, markei-making. and hedging activities with and for clients enr] counterparties, as well as Ihruugh its operating services activities (such as cash management and clearing arhvities). securities linancmg activities, investment securities portfolio, and cash placed wuh banks A portion ol the loans originated or acquired by the Firm s wholesale businesses are generally retained on ihe balance sheet, the Firm's syndicated loan business distributes a significant percentage ol onginanons into the market and is an important component of portfolio management.

Credit risk management Credit risk management is an independent risk management function that monitors and measures credit nsk throughout the Firm and defines credit nsk policies and procedures. The credit risk function reports to the firm's CRo (he Firm's credit risk management governance includes the following activities ' establishing a comprehensive credit nsk policy framework

- Monitoring and managing credit risk across all portfolio segments, including transaction and exposure approval

' Setdng industry concentration limits and establishing underwriting guidelines

- Assigning and managing credit authorities in connection with the approval of all credit exposure

* Managing criticized exposures and delinquent loans - Estimating credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement The Credit Risk Management function measures, limits, manages and monitors credit nsk across the rirm's businesses To measure credit risk, the Firm employs several methodologies (or estimating the likelihood of obligor or counterparty default Methodologies for measuring credit risk vary depending on several factors, including type of asset (e g. consumer versus wholesale), nsk measurement parameters (e.g. delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit rtsk measurement is based on the

probability ol default ol an obligor o' counter party, ilic toss seventy given a default event and the exposure at default Rased on these factors anc? related market-based inputs, the rum estimates credit losses for its exposures Probable credn losses mheien; m the consumer and wholesale held-frjr'irrvesrmc.i; loan portfolios are reflected in (he allowance lor loan losses, and probable credit losses inherent in lenoing-relaied commitments are reflected in the allowance for lending-related commitments lhese losses aie estimated using statistical analyses and other factors as described m Note 15 in addition, potential and unexpected credit losses are reflected m tne allocation of credit nsk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments ihe analyses lot these losses include stress testing that considers alternative economic scenarios as described m (he Stress testing section below For lurther mlormation. see Critical Accounting Estimates used by Ihe Firm on pages J 32-J 34

The methodologies used to estimate credit losses depend on [he characteristics o! the credit exposure, as described below

Scored exposure

The scored portfolio is generally held in CCB and predominantly includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans For the scored portfolio, credit loss estimates are based on statistical analysis of credil losses over discrete periods of time The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credil scores, collateral values, and other risk (actors Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality ol underwriting standards, and other internal and external factors The factors and analysis are updated on a quarterly basis or more frequently as martet conditions dictate

Risk-rated exposure

Risk-rated portfolios are generally held in CiB, CB and awm. but also include certain business banking and aulo dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default ("PO") and loss seventy given a default The probability of default is the likelihood that a borrower will default on its obligation, the loss given default ("LGD") is the estimated loss on the loan that would he realized upon the default and takes into consideration collateral and structural support lor each credit facility The estimation process includes assigning risk ratings to each borrower and credit facility to differentiate nsk within ihe portfolio. These risk ratings are reviewed regularly by Credil Risk Management and revised as needed to reflect the

iinrrower's ampin lirijnci.il <http://lirijnci.il> jiosiimn. nsk profile ami related t mijiera'. ihe calculations and assumptions are based on noth internal and external historical e»per.e:ict.-and management judgment and aie reviewed regularly

Stress testing

Stress testing is important m measuring and managing rredit risk in the Firm s credit porilolm The process assesses the potential impact ol alternative economic and busmess scenarios on estimated credit losses for the Fum Economic scenarios and the underlying parameters arc defined centrally, articulated in terms ol macroeconomir factors and applied across the businesses The stress test results may indicate credit migration, changes in delinquency trends and potential losses m the credit portfolio in addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country-specific stress scenarios, as necessary The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOR level, as well as to assess the impact of stress on individual counterparties Risk monitoring and management The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending ciedit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels The policy framework establishes credit approval authorities, concentration limns, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used tn evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses

Consumer credit risk ts monitored for delinquency and other trends, including any concentrations at the portfolio level, as certain of these trends can be modiMed through changes in underwriting pohnes and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credil risk profile of the portfolio

Wliiiies.lle credit rrsk is mnnitcirec: regularly 31 an aggr [■(;»:«. portloho, industry and individual client and coutrerpariy level with established continuation limits that are reviewed and revised as deemed appropriate by management lymrally on an annual basis industry and counterparty limits as measured m teims ot eiposure and economic nsk appetite, are subject lo stress based loss constraints in addition, wiong-way risk ihe risk that exposure to a counterparty is positively rnnelated with the impacl of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity lo meet its obligations is decieasing - is actively monitored as (his risk could result in greater exposure at default compared with a transaction with another counterparty that does not have this risk

Management of the Firm's wholesale credit risk exposure 15 accomplished through a number of means, including-

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements
- Collateral and other nsk-reduction techniques

In addition to Credit Risk Management, an independent Credit Review function, is responsible for.

- independently validating or changing the risk grades assigned to exposures in the Firm's wholesale and commercial-oriented retail credit portfolios, and assessing the timeliness of risk grade changes initiated by responsible business units, and
- Evaluating the effectiveness of business units' credit management processes, including the adequacy of credit analyses and risk grading/LCD rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwnttng guidelines.

For further discussion of consumer and wholesale loans, see Note 14. Risk reporting

To enable monitoring ot credit risk and effective decisionmaking, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors as appropriate.

Management's discussion and analysis

CREDIT PORTFOLIO

in the following tables, reported loans include loans retimed (i.e.. held-for-investment), loans held-for-sale, and certain loans accounted for at fair value, in addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans, see Note 3 and Note 4. For additional information on the rirm's loans, lending-related commitments, and derivative receivables, including the Firm's accounting policies, see Note J 4, Note 29, and Note 6. respectively For further information regarding the credit risk inherent in the Firm's cash placed with banks, investment securities portfolio, and sccunttes financing portfolio, see Note 5. Note 12, and Note 13, respectively.

For discussion ol the consumer credit environment and consumer toans, see Consumer Credit Portfolio on pages 89- 95 and Note 14 For discussion of wholesale credit environment and wholesale loans, see wholesale Credit Portfolio on pages 96-104 and Note 14.

Total credit portfolio

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CONSUMER CREDIT PORTFOLIO

The Firm's consumer portfolio consists primarily of residential real estate loans, credit card loans, aulo loans, business banking loans and student loans, and associated lending-related commitments. The Firm's focus is on serving primarily the prime segment ot the consumer credit market The credit performance of the consumer portfolio continues lo benefit from discipline in credit underwriting as well as improvement m the economy driven by increasing home

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prices and lower unemployment Both early-stage delinquencies (30 -89 days delinquent) and late-stage delinquencies (150+ days delinquent) for residential real estate, excluding government guaranteed loans, declined Irom December 31. 2015 levels The Credit Card 30* day delinquency rate and the nel charge-off rate increased from the prior year but remain near record lows For further information on consumer loans, see Note 14.

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Management's discussion and analysis

Consumer, excluding credit card Portfolio analysis

Consumer loan balances increased during the year ended OecemLiei 31. ?016. predominantly due to originations of high-quality prime mortgage and aulo loans (hat have been retained on the balance sheet, partially offset by oaydowns and the charge-olf or liquidation of delinquent loans The credit environment remained favorable as the economy stiengthcned and home prices increased PC I loans are excluded (torn the following discussions ol individual loan products and are addressed separately heiow For further information about the rirm's consumer portloho, including information about delinquencies, loan modifications and other credit Quality indicators, see Note 14

Hdme equity: The home equity portfolio declined Irom December 31. 2015 primarily reflecting loan paydowns and charge-offs Both early-stage and late-stage delinquencies declined from Decemher 31. 2015 Nonaccrual loans improved Irom December 31. 2015 primarily as a result of loss mitigation activities Net charge-offs lor the yeai ended December 31, 2016, declined when compared with (he pnor year as» result of improvement in home prices and delinquencies

At December 31. 2016. approximately 90% of the Firm's home equity portfolio consists of home equity lines ol credn ("Hl'.l OCs'l and the remainder consists ol home eauity loans ("HELOANs") HELOANs are generally fixed-rate closed-end. amortizing loans, wilti terms ranging Irom 3-30 ytiars in general, HELOCs originated by the Firm are revolving loans for a io-year period, after which tune the HELOC recasts into a loan with a 20-year amortization Period At the lime ot origination, the borrower typically Selects one of two minimum payment options that will generally remain in effect during the revolving period a monthly payment of i% of the outstanding balance, or mtci est-only payments based on a variable index (typically Prime) HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time Ihe HELOC converts to an interest-only loan with a balloon payment at (he end of the loan's term The carrying value of HELOCs outstanding was 134 billion at December 31, 2016. Of such amounts, approximately * 113 billion have recast from interest-only to fully

amortizing payments oi have been modified, - }15 billion arc scheduled to recast from interest-only to

fully amortizing payments in future periods, and ■ (6 billion are interest-only balloon HELOCs. which primarily mature after 2030

Tne following chart illustrates the payment recast composition ol tne approximately (21 billion of Hf.LOCs scheduled to recast m the luture. based upon then current contractual terms

HELOCs scheduled to recast (at Decvmbcr31.2016)

Balloon pi imanly oevond 70 Jt)

Recast in ?017

24%

Recast in ?0Lfi
14*

The Firm has consideied this payment recast risk in its allowance for loan losses based upon the estimated amount ol payment shock (i e , the excess of (he fully-amorrririf; payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the concsponding estimated PD and loss seventy assumptions As pari of its allowance estimate, (he Firm also expects, based on observed activity in recent years, that approximately 30% ol the carrying value of HF.LOCs scheduled to recast will voluntarily prepay prior to or after the recast. The HELOCs that have previously recast to fully amortizing payments generally have higher delinquency rates than the HELOCs within the revolving period, primarily as a result of the payment shock at the time of recast Certain other factors, such as future developments in both unemployment rates ann home prices, could also have a significant impact on the perlormance of these loans The Firm manages the nsk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile. The Tirm will continue to evaluate both the near-term and longer-term recast risks inherent in its HFLOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance lor loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile

lunior lien loans where the borrower h.is a senior lien loan lhat is eithei delinquent o: has been modified aie considered high-risk seconds Such loans are consideied ;o pose a higher nsk ol delault than tumor hen loans loi winch the senior hen loan is neither delinquent nor modified At Dereinber 31. 2016. the Firm esiunated (hat thr carrying value of its home ecuily portfolio contained approximately 11 1 billion of current junior lien loans that were considered high risk seconds, compared with }) * billion ai Decembcr31 201S Ihe Finn estimates the balance ol its lotal exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of Ihe senior lien loan) The Firm considers the increased PD associated with these high-risk seconds m estimating (he allowance for loan losses and classifies (hose loans that are subordinated tn a first hen loan that is more than 90 days delinauent as nonaccrual loans Ihe estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior hen loans into and out of the 30* day delinquency bucket. The Firm continues to monitor the risks associated with these loans For further information, see Note 14

Residential mortgage The residential mortgage portfolio predominantly consists of high-quality prime mortgage loans with a small component (approximately 2%) of the residential mortgage portfolio in subprime mortgage loans These subprime mortgage loans continue lo run-oil and are performing m line with expectations. The residential mortgage portloho. including loans held-for-sale, increased Irom December 31. 20is due lo retained originations of primarily high-quality fixed late prime mortgage loans partially offset by paydowns Bolh eai ly-stage and late-stage delinquencies showed improvement from December 31. 2015 Nonaccrual loans decreased Irom the prior year primarily as a result ol loss mitigation activities Nel charge-offs lor the year ended December 31, 2016 remain low. reflecting continued improvement in home prices and delinquencies

Ai December 31, 2016 and 2015, the Finn's residential mot tgage portfolio, including loans held-for-sale, included (9.5 billion and (ll.l billion, respectively, of mortgage loans insured and/or guaranteed by U.S government agencies, of which (7.0 billion and (8 4 billion, respectively, were 30 days or more past due (of these past due loans, (5 0 billion and (6 3 billion, respectively, were 90 days or more past due) T he Firm monitors its exposure to certain potential unrecoverable claim payments related to government insured loans and considers this exposure in estimating the allowance for loan losses At December Jl 2016 and J015. the Funis residential mortgage portfolio included J19 l billion and () / S billion respectively ol interest-only loans These loans have an mieresi-only payment period generally followed by an adjust a Die-rate or fixed-rate fully amortizing payment period io maturity and are typically originated as higher-balance loans to higher-income borrowers lo date, losses on this ponlolio generally have been consistent wilh (he broader residential mortgage ponlolio and the Firm's expectations The Firni continues to monitor the risks associated with these loans

Auto: Auto loans increased from December J], 2015. as a result of growth in new originations Nonaccrual loans increased compared with December 31,2015. primarily due to downgrades of select auto dealer risk-rated loans Net charge-offs for the year ended December 31. 2016 increased compared with the prior year, as a result of higher retail auto loan balances and a moderate increase m loss seventy The auto portfolio predominantly consists of prime-quality loans.

Business banking: Business banking loans increased compared with December 31, 2015 as a result of growth in loan originations Nonaccrual loans at December 31, 2016 and net charge-offs for the year ended December 31, 2016 increased Irom Ihe prior year as a result of growth m the portloho

Student and other: Student and other loans decreased Irom December 31, 2015 primarily as a result of the run-off of the student loan portloho as the Firm ceased originations of student loans during the fourth quarter ol 2013. Nonaccrual loans and net charge-offs also declined as a result ol the run-off of the student loan portfolio Purchased credit-impaired loans: PCI loans decreased as the portfolio continues to run off. As of December 31, 2016, approximately 12% of the option ARM PCI loans were delinquent and approximately 66% of the ponlolio had been modified into fixed-rate, fully amortizing loans

Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast Default rates generally increase on option ARM loans when payment recast results in a payment increase The expected increase in default rates rs conside/ed in the Firm's quarterly impairment assessment.

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Management's discussion and analysis

th*. following table provides a summary of lifetime principal loss estimates included in either the nonaccretable dillcrence or the allowance for loan losses

Home equity Subpnme mortitte

Summary of PCI loans lifetime principal loss estimates

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For further information on the Firm's PCI loans, including write-offs, see Note 14. Geographic composition of residential real estate loans

Top 5 States - Residential real estate, excluding PCI loam (at December 11,1016)

At December 31, 2016. (139.7 billion, or 63% of total retained residential real estate loan portfolio, excluding mortgage loans insured bv U.S government agencies and PCI loans, were concentrated in California. New York. Illinois, Texas and Florida, compared with (123 0 billion, or 61%, at December 31, 2015. California had the greatest concentration ol retained residential loans with 30% at December 31, 2016. compared with 28% at December 31. 2015. The unpaid principal balance of pet foans concentrated in California represented 55% of (otal PCI loans at both Oecember 31, 2016 and 2015. The following charts illustrate the percentages of the total retained residential real estate portfolio held in the top 5 states, excluding mortgage loans insured by U.S government agencies and PCI loans For further information on the geographic composition of the Firm's residential real estate loans, see Note 14.

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Top 5 Stites - Residential real estate, excluding PCI loins (it December 31,2015)

Current estimated loan-to-values of residential real estate loans

The current estimated average loan-to-value ("LTV") ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 58% at Oecember 31, 2016 compared with 59% at December 31. 2015.

Although the delinquency rate for loans with high LTV ratios is generally greater than the delinquency rate for loans in which the borrower has greater equity m the collateral, the average ltv ratios have declined consistent with improvements in home prices, reducing the number of loans with a current estimated LTV ratio greater than 100%.

The current estimated average LTV ratio for residential real estate PCI toans, based on the unpaid principal balances, was 64% at December 31, 2016, compared with 69% at December 31. 2015. Of the total PCI portfolio. 4% of the loans had a current estimated LTV ratio greater than 100%, and 1% had a current LTV ratio greater than 125% at December 31,2016. compared with 6% and 1%, respectively, at December 31. 2015.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance ol this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing

For further information on current estimated LTVs of residential real estate loans, see Note 14 Loan modification activities - residential real estate loans The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCi loans, that have been seasoned more than six months show weighted-average redefault rates of 21% for home equity and 22% lor residential mortgages The cumulative performance metrics tor modifications to the PCi residential real estate portfolio (hat have been seasoned more than six months show weighted average redefault rates of 20% lor home equity. 19% for prime mortgages, 16% lor option ARMs and 3 2% for subprime mortgages. The cumulative redefault rates reflect the performance of modifications completed under both the U S Government's Home Affordable Modification Program ("HAMP") and the Firm's propnetary modification programs (primarily the Firm's modification program that was modeled alter HAMP) from October 1, 2009, through December 31, 2016.

Certain loans that were modified under hamp and the Firms proprietary modification programs have interest rate reset provisions ("step-rate modifications") Interest rates on these loans generally began to increase commencing in 2014 bv 1% per year, and continue to do so, until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of ihe modification date At Decembei 31, 2016, Ihe carrying value of non-PCI loans and ihe unpaid principal balance of PCi loans

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modified in active step-rate modifications were (3 billion and (9 billion, respectively. The Firm continues to monitor this risk exposure and the impact of these potential interest rate increases is considered in the Firm's allowance for loan losses

The following table presents information as of December 31. 2016 and 2015, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCi loans continue to be accounted Tor and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as TDRs. For further information on modifications for the years ended December 31. 2016 and 2015, see Note 14.

Modified residential real estate loans

I 2,358 1 6.690

Modified residential real estate loans, exludlnf PCi loan)[1]*

S 2,2«4 (6,031

Total modified residential real estate loam, excluding PCI

t 2.576 5,686 3.242 10.427

Pilme mortgage Subprime montage

Option ARMs loans t kW 1 2.1T1 t v.tUB 1

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Management's discussion and analysis

NonperTornnng assets

The following [a'lit uresents information as ol Opremher 31 2016and 2015.about consumer e»rluding credit card imnperloniidg assets

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Assets acquired in loan salislaclioi

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Active and suspended for ecfosure for information on loans iM.ii vicie m itip process ol active or suspended ■disclosure, see Mote J a

Nonaccrual loans. Ihe following table presents changes in the consumer excluding credit card, nonaccrual loans for the veais enaed December 31 2010 and 2015

Nonaccrual loans Vear emtec Decembei 31

Credit card

Total credit card loans increased Irom December 31. 201S due io strong new account grnwin and higher sales volume The December 31. 2016 30- day delinquency rate increased to 1 61% l'oiu I -13% ai December 31 2015 For the years ended December 31. 2016 and 2015. the net charge-ofi rates were 2 63% and 2 51%. respectively The credit card portloho continues lo reflect a largely well-seasoneG. rewards-based portfolio that has good U 5 geographic diversification New originations continue lo grow as a percentage ol the total portfolio, in line with ihe Firm's credit parameters, these original ions have generated higher luss rates, as anticipated, than the more seasoned portion of the ponlolio. given Ihe higher mix of near-prime accounts being originated These neai-pnme accounts have

net revenue rates and returns on eaunv mat are ingner than the portfolio average

loans outstanding in the top live states ol California Texas New Yoi k. Florida and Illinois consisted ol f 62 8 billion in receivables, or 44% of the retained loan portfolio at December 31. 201 o. compared with J57 5 billion, or 44%. at Derembei 31.2015 The greatest geographic concentration ol credit card retained loans is in California, which represented 15% and 14% of total retained loans al December i\. 2016 and 2015. respectively lor furthei informalnri on Ihe geographic and FICO cornyosition of (fie Finn's credit card loans, see Note 14

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lop 5 States Credit OrrJ - Retained (at December 11. 2016)

rap s Statef Credit card - Retained (at December 31. 2015)

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Nonaccrual loans in the residential real estate portfolio decreased to 14 l billion from (4.6 billion ai December 31. 2016, and 2015. respectively, ol which 29% and 31% were greater than 150 days past due. respeciively in the aggregate, the unpaid principal balance ot residential real estate loans greater than 150 days past due was charged down by approximately 43% and 44% to the estimated net realizable value of the collateral ai December 31, 2016 and 2015. respectively

Modifications of credit card loans At December 31. 2016 and 2015. the Firm had $1 2 billion and J i s billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms The decrease in modified credit card loans outstanding from December 3]. 2015, was attributable to a reduction m new modifications as well as ongoing payments and charge-offs on previously modilied credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off However, the Firm establishes an allowance, which is offset against loans and charged to interest income, lor the estimated uncollectible portion ol accrued and billed interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14

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Management's discussion and analysis i

WHOLESALE CREDIT PORTFOLIO

The Firm's wholesale businesses are exposed to credit risk through underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services such as cash management and clearing activities A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit portfolio, excluding the Oil & Gas. Natural Gas Pipelines, and Metals & Mining portfolios, continued id be generally stable for the year ended December 3). 2016, characterized by low levels of criticized exposure, nonaccrual loans and charge-ofls See industry discussion on pages 97-101 for further information Growth in retained loans was predominantly dnven within the commercial real estate portfolio in Commercial Banking, and arross multiple commercial and industrial industries in Commercial Banking and the Corporate & investment Bank Discipline in underwriting across all areas ol lending continues to remain a key point of focus. The wholesale portfolio is actively managed, in P4rt by conducting ongoing, in-depth reviews of client credit duality and transaction structure, inclusive of collateral where applicable, and of industry, product and client concentrations

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Wholesale credit portfolio

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Loans - reported Derivatrve receivables

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Credit dertvatiws used in credit pot (fat n

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a) Rereivehlw fiten customers and other include 117 3 billion and f. 13 3 billion of margin toans ... ecember 31.2016 and 2015 respectively, to prime ... kcraf e customers, these am classified in accrued m:eiesl and ... unts recervablr on the Consolidated bala...

b) Repiesents the net notional amount ol protection purcha... dit dei ivat... sed to manage both per lor mine and nonper form... wholesale ;redit ex... es, '.hese anivstivvs do n... untiruj under U S GAAP for aori... in... ion; see Credit ... atives on paces 103-104, and ...

c) (Kludes asset* acquired in loan salislACtwnv

The following tables present the maturity a... of the wh... esale ... of December 31, 2016 and ... ra... ings, which generally ... rati... P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 14

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Wholesale credit exposure - maturity and ratings profile

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wholesale credit exposure - Industry exposures The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with aciual or potential credit concerns. Exposures deemed criticized align with the U S. banking regulators' definition of criticized exposures, which consist ot the special mention, substandard and doubtful

categories The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was J19.6 billion at December 31.2016, compared with 114 6 billion at December 31. 2015, driven by downgrades, including within the Oil & Gas. Natural Gas Pipelines, and Metals & Mining portfolios

Management's discussion and analysis

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Wholesale credit exposure - Industries'"

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(*] Th* Industry rankings presemrd in the lahle asof December 11. ?0ls. are based on the Industry rwtonpot lhe corresoordil^ exposures al December 31 1016. not atiull rankli^s of such exposures at December 31 2015 (6J In addition lo (he credit na exposure to sCKes ald municipal eowmenil (both u S. and non U.S.) at December 31.2016and 7015. noted above, the firm held S9 l billion and f 7 6 billion, lespnirvelv.ol trad mc securities. J3i 6 billion and 133 6 billion, resoectrvely. ol Af Ssecurru-s. art 114 5 billion and |12 8 Wlwn. respwivety. ol him securities, issued by U S state and mimk-loal pwwmnenis. fxfurtw ^ (U All other includes indmduaK; SPEs. holding companies, and prrvat* education and cine organiiatiortt. represenlini approximatety 56%. 36%. 4% arc) 4%. lespecrvely at Decembel ll.20)6.ands*% 37%. 5%and 4%. respectively, at Decembel 31.201S ld) ExclurJes cash placed (nth banks d 1380 2 Wlionandt 351 0 tvllion, al December 31.2016 and 701S, respectively. •hx.ll is predominantly placed wilt) various central bards, primailhj Federal Resetw; Banks.

e) Credil exposule is net or nst parucvatiom (ndexJuties the benefil of credit derfvativet used in credit portfolio manasement Mint in heM against dernative recetvaWes ce loans and lqwd secvilies and olher cash coAa:eral held against derhrati** receivables.

f) Represents the net noinnal amounts ol protection purchased end sou through credit derivatives used 10 manage the credit exposures. Ilese deirvatives do not qualify (or hedf* accounting under US. GAAP The Al other category Includes purchased credit proteflion on certain cledit indues.

Management's discussion and analysis

Presented below is a discussion of certain industries to which the Firm has significant exposures and/or which Present actual or potential credit concerns Real Estate

Exposure to the Real Estate industry was approximately 16 1% and H.6% of the Firm's total wholesale exposure as of Oecember 31, 2016 and 2015, respectively Exposure to this industry increased by 418 2 billion, or 16%, in 2016 to (135.0 billion primarily driven by Commercial Banking. The ihvestment-grade percentage of the portfolio increased to 77% in 2016, up from 754b in 2015. Asof December 31,

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Total Oil > Gas and natural Gas Pipelines

2016, (106 3 billion of the exposure was drawn, of which 83% was investment-grade, and 83% of the 1135.0 billion exposure was secured As of December 31, 2016, (80 1 billion of lhe J] 3b 0 billion was multifamily. largely in California; of the 180 1 billion. 82S was investment-grade and 98% was secured For further mlormation on commercial real estate loans, see Note 14.

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Oil & Gas and Natural Gas Pipelines The following table presents Oil A Gas and Natural Gas Pipeline exposures as of December 31, 2016. and December 31, 2015.

Metals & Mining
Exposure lo the Metals & Mining industry was approximately 1 6% and 1.8% of the Firm's total wholesale exposure as of December 31, 2016 and 2015, respectively Exposure to the Metals S Mining industry decreased by (630 million in 2016 to (13.4 billion, of which (4.4 billion was drawn The portfolio largely consisted of exposure in North America, and was concentrated in the Steel and Diversified Mining sub-sectors. Approximately 41 % and 46% of the exposure in the Metals & Mining portfolio was investment-grade as of December 31, 2016 and December 31, 2015. respectively while the overall trends and sentiment have been stabilizing, the Firm continues to actively monitor and manage its exposure to this industry loans
in the normal course ol its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-nct-worth individuals. For further discussion on loans, including information on credit Quality indicators and sales of loans, see Note 14

The following lahle presents the change tn the nonaccrual loan portfolio for the years ended December 31.2016 and 2015. Wholesale nonaccrual loans increased primarily driven by downgrades in the Oil & Gas portfolio

wholesale nonaccrual loan activity 1"
Additions
, Year ended Pet enter 31: lei lrjlfons| ^.Ml"".. ;. MIS \]
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status, or when principal or interest hue been i- ■"-"- "_1
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The following table presents net charge-olls/rccovencs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2016 and 2015 The amounts in the (able below do not include gams or losses from sales of nonaccrual loans

Wholesale net charge-offs/(recoveries) ,lt» ended OecemlierJt">^-%^^
$ 371,778 % 337,407
I On raflfaftt. ertetf ratiosT TAR t^yjJS-'r"'- »"'rV ≡:V" 20' * Loans - reported
Average bans retained
Gross charlt-ofTs
Gross recoveries
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Lending-related commitments
The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfill its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's future credit exposure or funding requirements, in determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, (he Firm has estimated a loan-equivalent amount for each commitment. The loan-equivalent amount of the Firm's lending-related commitments was (204 6 billion and (212.4 billion asof December 31. 2016 and 2015. respectively.

Clearing services
The Firm provides clearing services lor clients entering into securities and derivative transactions Tin ough the provision of lhese services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties. Where possible, the Firm seeks to mitigate its credit nsk to us clients through the collection ol adequate margin at inception and throughout the hie of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement For further discussion of clearing services, see Note 29.

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Management's discussion and analysis

Devi live contracts
in (he normal course ol business the Finn uses derivative instruments nieclumniamly lot market-ma king activities Derivatives enable customers to manage exposures to fluctuations in interest rates currencies and oirier markets Ibe Firm also uses derivative instruments to manage us own credit and other maikel risk exposure The nature of the counterparty and the settlement mechanism ol the derivative affect the credit nsk to which the Firm is exposed For OTC derivatives Ihe Firm is exposed to the credit nsk ol the derivative counterparty For exchange-Haded derivatives ("F.TD"). such as lutures and options and "cleared" over-the-counlei ("OTC cleared") derivatives, the Firm is generally exposed to the credit nsk ol the relevanl CCP Where possible, the Firm seeks to mitigate its credit riik exposures arising Irom derivative transactions through the use ol legally enforceable master netnng anangements and collateral agreements For further discussion of derivative contracts, counterparties and settlement types, see Note 6
ZO»
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The following table summarizes the net derivative receivables (or the periods presented
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1 794 21.77)
4.919
6.777
derivative receivables
December iJ.'mmlinnM ■■
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Credil derivanve* Foiei(n enchanae
Tout, net cash collateral

Total, net of ill collateral

Derivative receivables reported on the Consolidated balance sheets were $64.1 billion and 159 7 billion at December 31. 2016 and 2015, respectively These amounis represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm However, m management's view, Ihe appropriate measure ol current credit risk should also take into consideration additional liquid securities (primarily U.S government and agency securities and other group ot seven nations ("G7") government bonds) and other cash collateral held by the Firm aggregating 122 7 billion and $16.6 billion at Oecember 31. 2016 and 2015, respectively, that may be used as security when Ihe fair value of the client's exposure is m the Firm's favor The change in derivative receivables was predominantly related to client-driven market-making activities in CIB. The increase m derivative receivables reflected the impact ot market movements, which increased foreign exchange receivables, partially offset by reduced commoditydeiivativcreceivables.
in jiJcbucri io iijp rolljteial described m ;»e i>ri-r.ea>nr; paragraph tne Firm also holds additional collateral (primarily cash G7 government securities, oihpi iiauid government agency and guaranteed securities, ana corporate debt and ecw:v securities! delivered bv clu'nts at tne initiation ol transactions, as well as colUifMl related to contracts thai have a non-daily call frequency and collatem. thai ihe Firm has agreed to return but has noi yet settled as ol tne- reporting date Although this collateral does not reduce the balances and is nor included m the tahl'.- above, it is available as security against potential exposure lhat t on ld arise should the fan value ol the c hem's derivative transactions move in the Firm's lavoi The derivative receivables fair value, dpi of all collateral, also does not include olhcr credit enhancements, such as letters of credit For additional mlormation on the Firm's use of collateral agreements, see Note 6

While uselul as a current view ol credit exposure, (he net (air value of the dpnvauve receivables dues not capture ihe potential fuiuie variability of that credit exposure To rapture the potential luture variability of credit exposure, the f irm calculates, on a clienl-bv-client basis. I lime measures o> potential derivatives-related liedit loss Peak. . Derivative Risk Eauivalent ("ORE"), and Averagp exposure ("AVfi") These measures all incorporate npttuif, and collateral benefits, where applicable. Peak represents a conservative measure of potential exposuie to a counterparty calculated in a manner that is broadly equivalent to a 97 S% confidence lpvl>l over the life ol the transaction Peak is (he primary measure used by (he Firm for setting of credit limits For derivative transactions, senior management reporting and derivatives exposure management DRE exposure is a measure that cxpi esses the risk of derivative exposure on a basis intended lo be equivalent to the risk of loan exposures DRE is a less extreme measure of potential credit loss than Peak and is used (or aggregating derivative credit risk exposures with loans and other credit risk.

Finally. AVG is a measure ol the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral AVG exposure over the lotal lite of (he derivative contract is used as the primary metric for pne ing purposes and is used to calculate credit capital and the CVA. as further described below The three year AVG exposure was $31 I birfion and $32 4 billion a(December 31, 2016 and 2015. respeciively. compared with derivative receivables, net of all collateral, of $41 4 billion and $43 l billion at December 31. 2016 and 2015. respectively

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, io reflect the credit quality ol counterparties The CVA is based on ihe Firm's AVG to a counterparty and the counterparty's credil spread in the credit derivatives market The primary components of changes in CVA are ci edit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit

nsl in the derivatives pyniolio in addition Hie f irm's risk management process takes into consideration the potential impart of wrong-way nsk. which is broadly defined as the potential ior increased correlation betwpen the f irm's exposure to a counterparty (AVG) and ihe counterparty s t reo:t quality Many factors may influence the nature and iriagnmirje o! these correliuoin over time Jo the exicw that these correlations are identified the Finn may adiust the CVA assouaipc: will- thai coun;erpany's avg Tne Firm risk manages exposuie to changes in CVA by entering uuo credit derivative transactions, as well as interest rate, loreign exchange, equity and commodity derivative transactions

AAA/444 tO AA fAti A-/A1 to* /A] BBTWU41 to IIBH /Bail BB'/FUlto II./D.3 CCWCui ind belme

Total

)d Amounts have been revised to con lor m mth the en

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements - excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity - was 904 as of December 31. 2016, largely unchanged compared with 87S as of December 31, 2015.

Credit derivatives

The Firm uses credit derivatives for two primary purposes first, m Us capacity as a market-maker, and second, as an end-user to manage the Finn's own credit risk associated with various exposures. For a detailed description of credit derivatives, see Credit derivatives in Note 6

The accompanying graph shows exposure profiles to the Firms tunent derivatives ponlolio over the ne«t 10 years as calculated by the Peak ORE and AVG metrics The three measures generally show ihai exposure will decline alter ttic hrst year il no new trades are added to me portfolio

11,449 ■.SOS

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Exposure profile of derivatives measures

10.371 10.VJS 13.S07 7.S0D

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Credit portfolio management activities included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure m the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities, for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a markel-maker in credit derivatives, see Credit derivatives in Note 6

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Management's discussion and analysis

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Credit derivatives used m credit portfolio management «tivittes

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Credit dei Ivanves used to marace-		
Loam and lending -related commitmrrti	f 2.410	% 2.799
Derivative receivables	1*^84	IB 392
Cridh derivatives used in credit portfolio	l 22,114	f 20.6S1

(al Amoum are presented net. considenqf Ihe Fun's net protection purchased 01 sold with respect to each underlyini reference entity or

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U 5 GAAP, these derivatives are reported ai fair value, with-gams and losses recognized tn principal transactions revenue. In contrast, ihe loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment.

between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that ts not representative, in the Firm's view, ol the true changes in value of the Firm's overall credit exposure

The effectiveness of credit default swaps ("CDS") as a hedge against the Firm's exposures may vary depending on a number ol factors, including ihe named reference entity (1 e , the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS), the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm), and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures) However, the rum generally seeks 10 purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in matunty are actively monitored and managed by the Firm.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio Management also determines an allowance lor wholesale and certain consumer lending-related commitments

For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 132-134 and Note 15.

At least quarterly, the allowance for credil losses is reviewed by Ihe CRO, the CFO and the Controller of the Firm, and discussed with the DRPC and the Audit Committee. As of December 31, 2016, IPUorgan Chase deemed the allowance tor credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio

The consumer allowance for loan losses remained relatively unchanged from December 31, 2015. Changes to the allowance for loan losses included reductions in the residential real estate portfolio, reflecting continued improvements in home prices and lower delinquencies, as well as runoff in the student loan portfolio These reductions were offset by increases in the allowance for loan losses reflecting loan growth in the credit card portfolio (including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), as well as loan growth in the auto and business banking loan portfolios For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 89-95 and Note 14.

The wholesale allowance for credit losses increased from December 31, 2015. reflecting the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios. For additional information on the wholesale portfolio, see Wholesale Credit Portfolio on pages 96-104 and Note 14

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Management's discussion and analysis

Summary ol changes in the allowance 'or Otdil losses kiiowaw* in tun ii

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Provision tor credit losses

Tor the year ended December j I TO 16 the provision lor credit losses was SS A billion, compared with (3 8 billion lor tne year ended December 31 3015

the total consumer provision Inr credit losses increased lor the year ended December 31. 2016 when compared with the pnci· year ihe increase m the provision was driven by

- a SSi20 million increase lelaied to the credit card portfolio, lino lo a $000 million addition m tbf allowance for loan losses, as well as 1320 million of higher nel charge nfls, driven by loan growth, including growth in iiewei vintages which, as anticipated, have higher loss rates compared to ihe overall portfolio.
- a $450 million lower benefit related to the residential real estate portfolio, as the current year reduction in the

allowance for loan losses was lower tnan the pnor year The reduction m both penuds ieffected continued improvements in home prices and lower delinquencies and

- a 1150 million increase related to the auto and business banking portfolio, due to additions to the allowance for loan losses and higher nel charge-oils, reflecting loan growth in the portfolios

The wholesale provision for credit losses increased lor the year ended December 31. 2016 reflecting the impact o! downgrades in the Oil & Gas and Natural Gas Pipelines poillolios

4.S44 t 11,77ft t 5.806 t 3<H 1

. total pTovejon for credit lows

2016 7015

467 % (a;i:

4,047 3 122

467 i (BIJ J

4,047 3.12:

t 5.080 j 3.663 t 3 224 % 2»1 »

ttoimitmmn"'

4.S54 1 1820 1 3 4)4

GdainM loam, end of per kio eetaintd loam, average Kikiani eneotper«l Credit ratio!

AllOKinrr lar lean ipsses lo retained loan 4<lo"«nre lor bi." losses lo retained mnaicrual

AHowince lev loan kniei id retained nonaccrual

loans rxciuding cnd;l caid Mi chirp-oft lain

Credu r allot. eicMiiig residential real eitBtc KlkMM

D 09% 0 57%

Mute'in tne table above, the financial measures which exclude the unpad ol PCI linns are non-GAAP financial measuirs.

(al Writeoffs ol PCI loans are recorded against ihe allowance tor loan losses when actual losses lor a pool cxecd estimated losses ttut were recorded as michase accounting adjustments at lhe time nl acquisition a write oft ol a PCI loan is recognized when ihe underlying loan is irrnuvrd Iron a pool (e.g., upon liqwdauon)

(bl includes nskraled loans thai have been placed on nonacaual siaius and loans thai haw? been modified in a TDR The assel specita crwjii card allowance lor loan losses modified in a TOO rs calculated based on the bans' uripnal contractual interest rales and does not consider any incremental penalty rairs. tO The allowance lor lending-retated commitmerts rs reported in accounts payable and other liabilities on the Lonsoli.iaird balance sheets, (d) The Fern's policy is generally to ewmpl credit card loans hum being placed on nonacaual status as permitted by regtilaray guilance.

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Management's discussion and analysis

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in Ihe Firm The Country Risk Management group is responsible for developing guidelines and policies for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country Country risk organization The Country Risk Management group, part of the independent nsk management function, works in close partnership with other risk functions to assess and monitor country risk within the Firm The Firmwide Risk txecutive for Country Risk reports (o the Firm's CRO

Country Risk Management ts responsible for the following functions

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification ot potential country risk concerns
- Providing country risk scenario analysis

Counfry risk ide/tfiflcafion and measurement The Firm is exposed to country risk through its lending and deposits, investing, and market-making activities, whether cross-bolder or locally funded. Country exposure includes activity with both government and private-sector entities in a country Under the rirm's internal country risk management approach, country exposure is reported based on ihe country where the majority ol the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain (ranched credit derivatives Different measurement approaches or assumptions would affect the amount of reported country exposure

Under the Firm's internal country risk measurement framework

- Lending exposures are measured at the total committed amount (funded and unfunded), nel ol the allowance for credit losses and cash and marketable securities collateral received
- Deposits arc measured as ihe cash balances placed with central and commercial banks
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's lair value, net of the fair value of the related collateral Counterparty exposure on derivatives can change significantly because of markci movements
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in Ihe Firm's market-making activities is measured on a nel basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity, (his reflects the manner in which the Firm manages these exposures

Some activities may create contingent or indirect exposure related to a country (for example, providing clearing services or secondary exposure to collateral on securities financing receivables) These exposures are managed in the normal course of business Ihiough the firm's credit, market, and operational risk governance, rather than through Country Risk Management

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements For further information on the FFIEC's reporting methodology, see Cross-horder outstandings on page 292

Country risk stress testing

The country risk stress framework aims to estimate losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sen or performance concerns.

Country risk monitoring and control The Country Risk Management group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits are actively monitored and reported on a regular basis Country limil requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools, such as signaling models and ratings indicators, tor early identification of potential country risk concerns.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U S) as of December 31,2016 The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions Country exposures may fluctuate from period to period due to client activity and market flows.

The increase in exposure to Germany, Japan and Luxembourg since December 31,20)5 largely reflects higher Euro and Yen balances, predominantly placed on deposit at the central banks of these countries, driven by changing client positions and prevailing market and liquidity conditions

Top 20 country exposures

46.9 i
25.0

Trance
China
Canada
Australia
Netherlands
Luxembourg
e:nnl
Switzerland
India
Italy
Korea
rang Kong
Singapore
Mexico
Saudi Arabta
Uniled Arab emirates
Ireland

(a) lending and deposits includes kuns arc accrued interest receivable (net ol collateral and the allowance lor loan losses) deposits with banks (including central banks), act rjiianres. other mone'.ai i assets, issued letters ol credit nel of participalioni.aiKl unused commitments to extend credit tfludel intra-day and operatinc, exposures such as Irom settlement and rJeariruj activities.
(hi Includes market making inventory ars secun!es.counlriu*rtv exposure on derivative aid securities (inantirw^ nut of col lateral and hedging.
(c) includes single reference entity ('single-name'), index arc uarched credil derivatives fur which one or more ol the underlying reference entities is in a country listed in the above table
(dl includes capital rrwesied in local entities and physical commodity

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Management's discussion and analysis

UQUiDtrY RISK MANAGEMENT

Liquidity nsk ii [lie r,sk trial ihe Firm will be- unanie to meet n", contractual and connngen: obligations or trui n does not hive the apoiopnaie amount composition and tpnor of funding and hquidny to support its assets arm liabilities

Liquidity risk oversight

The Firm has a liquidity risk oversight (unction whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the F irm Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group The DO treasury and Corporate ("CTC') CRO. who reports to the CRO. as nan ot the independent risk management funrlion. has responsibility lor firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include hut are not limited to

- Establishing and monitoimg limits, indicators, and thresholds, including liquidity appetite loleianccs,
- Defining, monitoring, and reporting internal firmwide and material legal entity liquidity stress lests. and monitoring and reporting regulatory delincd liquidity stress testing.
- Monitoring and reporting liquidity positions, balance sheet variances and funding activities.
- Conducting ad hoc analysis lo identify potential emerging liquidity risks.

Risk governance and measurement Specific committees responsible for liquidity governance include firmwide *LCO as well as line of business and regional ALCOs. and the CTC Risk Commuiee in addition, ihe DRPC reviews and recommends to the Board of Directors, lor formal approval, the Firm's liquidity risk tolerances, liquidity strategy, and liquidity policy al least annually For further discussion of ALCO and other risk-related committees, sec Enterprise wide Risk Management on pages 71-75

' Interna/ Stress resting Liquidity stress tests are intended to ensure the Firm has Sufficient liquidity under a variety of adverse scenarios, including scenarios analyzed as pari of the Firm's resolution and recovery planning Stress scenarios are produced for JPMorgan Chase & Co ("Parent Company") and the Firm's material legal entities on a regular basis and ad hoc stress tests are performed, as needed, in response to specific market events or concerns Liquidity stress tests assume all of (he Firm's contractual obligations are met and take into Consideration varying levels of access to unsecured and Secured funding markets, estimated non-contractual and Contingent outflows and potential impediments to the ivailahility and transferability of liquidity between Jurisdictions and material legal entities such as regulatory, legal or other restrictions t iquidity outflow assumptions are modeled across a range ol time horizons and Contemplate both market and idiosyncratic stress

Results ol stress tests are considered in tht- formulation ol ihe Finn s tundmg plan and assessment ot its liquidity position the Parent Company acts as a source of funding tor the rum through stock and long-term deh! issuances, and the ihC nrnvitles lundmg support to Ihe onsomg operations ol the Parent Company and us subsidiaries as necessary ihe Firm maintains licuidny at the Parent Company and the inc. m addition to liquidity held at tne I'jijeiiilinp subsidiaries at levels sufficient to comply with liouidily risk toleiSlices and minimum liquidity requirements lo manrijjp through jienods ot stress where access ic normal funding source[1], 's dis'upied

Liquidity management

treasury and 00 is responsible lor liquidity management Tne primai v objectives ot effective liquidity management are to ensure thai Ihe Firm's roie businesses and material legal enniies are able to opeiate m support of client needs, meet contractual and contingent obligations ihrough normal economic eyries as well as during stress events, and lo manage an optimal funding mix. and availability ol liquidity sources The firm manages liquidity and funding using a centralized, global approach anoss its entities taking into consideration both their current liquidity profile and any potential changes over time, in order to optimize liquidity sources and uses

in ihe context of the Firms liquidity management. Treasury and CIO is responsible fur

- Analyzing and undemanding rhe liquidity characteristics of the Firm, lines of business and legal entities' assets and liabilities, taking into account legal, regulatory, and operational restrict ions.
- Delmmg and monitoring firmwide and legal entiiy-spectfic liquidity strategies, policies, guidelines, and contingency funding plans.
- Managing liquidity within approved liquidity risk appetite tolerances and limits,
- Setting transfer pricing in accordance with underlying liquidity characteristics ol balance sheet assets and liabilities as well as certain off-balance sheet Hems

Contingency funding plan

The Firms contingency funding plan ("CFP"), which is reviewed by ALCO and approved by the DRPC. is a compilation of procedures and action plans (or managing liquidity through stress events. The CFP incorporates the limirs and indicators sel by the Liquidity Risk Oversight group These limits and indicators arc reviewed regularly to identity the emergence nl nsks or vulnerabilities in the Firm's liquidity position The CFP identifies the alternative contingent liquidity resources available lo the Firm in a stress event

LCR and NSFR

The il S ten iu'e requires ihe Fum to measuie the amouni ol hqla held by ihe rurn in relation 10 estimated net cash outflows wiinm a 30-day period during an acme stress event The ICR was recuired 10 be 90% at January l 2016. increased to a minimum ol 100** commencing January]. 201/ Ai December 3J. 2016 the firm was compliant with tne Fully Phased-in U S ICR

On Oecember 19, 2016 the federal Reserve puhlrshod final U S LCH public disclosure requirements for certain bank holding companies and nonbank financial companies Starting with the second Quarter of 2017, the Firm will he recu.red to disclose quarterly its consolidated ICR pursuant lo Ihe it S LCR rule, including the rirm's average LCK lor the quarter and the key quantitative components of the average l.CR m a standardized template, along with a qualitative discussion ol material drivers of Hie ratio, changes over time, and causes of such changes

The Basel Committee final standard lor the net stable funding ratio ("Basel NSFR") is intended 10 measure the adequacy ol "available" and "required" amounts of stable funding over a one-year horizon Basel NSFR will become a minimum standard by January 1. 2018 and requires that (his ratio be equal ro at feast 100% on an ongoing basis.

On April 26. 2016, the u S NSFR proposal was released for large banks and bank holding companies and was largely consistent with Basel N5FR. The proposed requirement would apply beginning on January l, ?0i 8. consistent with the Basel NSrR timeline

The Firm estimates it was compliant with the proposed U S NSI'tt asof December 31, 2016 based on its current undei standing ol the proposed rule HQLA

HQla 15 the amount of assets that qualify for inclusion in the Ll S LCR HQLA primarily consists of cash and certain unencumbered high quality liquid assets as defined in the final rule.

as of December 31, 2016. the Firm's HQLA was (524 billion, compared with J.496 billion as of Oecember 31. 20] 5. The increase m HQIA primarily reflects (he impact of sales, maturities and paydowns in non-HQLA-eligible securities, as well as deposit growth in excess of loan growth Certain of these actions resulted tn increased excess liquidity at JPMorgan Chase Bank. N A and Chase Bank USA. N A. which is excluded from (he Firm's HQLA as required under the U S LCR rules The Firm's HQLA may fluctuate from period to period primarily due to normal flows from client activity

The following table presents ihe Firms estimated hqi a ■nrluded in the U S LCH broken out by HQl a r-liniDl" cash and securities as ol December 31. 2016

HQLA

Eligible cim[1]*

(at Cash on deposit at central Danks

(b) Prr<loiriiiian:iyincliirteiU b arji-ncvMLS US lre«iinn *t Mivncign nnntli nel ol apn'KAtilr haircuts urate: U S ICIt ru (C) Ltfludes e<cciL HQl a ai il'Morgan Chase Bank f.A aiidCh

As of December 31. 2016, in addition to HQl.A resorted above, the Fum had approximately 1262 billion ol unencumbered marketable securities, such as equity securities and fixed income debt securities, available 10 raise liquidity, if required This includes HQLA-eligible securities included as part ol the excess liquidity at JPMorgan Chase Bank. N A The Firm also maintains borrowing capacity at various Federal Home loan Banks ("FHLBs"). the Tederal Reserve Bank distount window and various other central banks as a result of collateral pledged by the Tirm to such banks Although available, ihe Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity as ol December 31, 2016. the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately 1221 tulhon This remaining borrowing capacity excludes the benefit of securities included in HQLA or other unencumbered securities that are currently held at the Federal Reserve Bank discount window, but loi which the Firm has not drawn liquidity

Funding Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio (1894 8 billion at Oecember 31, 2016), is funded with a portion of the Firm's deposits (Si.375.2 billion at December 31. 2016) and through securitizations and, with respect 10 a portion of ihe Firm's real estate-related loans, with secured borrowings from the FHLBs Deposits in excess ol the amount utilized to fund loans are primarily invested m the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics Securities borrowed or purchased under resale agreements and trading assels-

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debt and equity instruments aie pnmarily funded by (he Firm's securities loaned or sold under agreements to repurchase, trading liabilities-debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity in addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds Irom

Consumer 8 Community Bank tit Corporate (investment Sank Commercial Banking *sset 8 Wealth Management

Corporate

Total firm

5S7.C45 395.228

the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio See the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance

172,835 151.334 S.482

fria.117 :

412.434

179.532 161,577 3,299

The following table summarizes short-term and long-term funding, excluding deposits, asof December 31. 2016 and 2015, and average balances for the years ended December 31, 2016 and 2015 Foi additional information, sec the Consolidated Balance Sheet Analysis on pages 43-44 and Note 21

Sources ol funds (excluding deposits)

11.718 S 11.567 i

j..- =-!"-'-.«":.-^.-..■■.jo.ii'iit'tit-J:initio ■vzois-- - ' iqi* ■*!.■:"■ ::::?oiVi'

> 7,719 i 8,774 %

Commeicul paper Wholesale landing Clitnt cash mtnttrrmrn

Total commercial paper

Obligations of Flrrn-admln'stered multi-setter conduits"

151.042 1 149.964

2,145 },9u9

11,940 25.0Z7

17,797 37.813

Securities loaned or sotd under agreements to repurchase: Securities sold under agreements to repurchase Securities loaned"[1]

Total securities loaned or told under agreements to repurchase""-"*"

Senior notes

Iruii prclerred seturihes Subordinated drbt yiurrured notes

A key strength of the Firm is its diversilied deposit Ii anchise, through each of its lines ol business, which provides a stable SCiurce of funding and limits reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer deposits, which are considered a stable source of liquidity Additionally, the majority of the Firm's wholesale operating deposits are also considered to be stable sources of liquidity because they are generated Irom customers that maintain operating service relationships with Ihe Firm

The Firm's loans-to-deposits ratio was 65% at both December 31, 2016 and 2015

Asof December 31, 2016, total deposits lor the Firm were 11.375.2 billion, compared with 11.279 7 billion at December 31. 2015 (61% of total liabilities at each of December 31, 2016 and 2015). The increase was attributable lo higher consumer and wholesale deposits The increase in consumer deposits reflected continuing strong growth from existing and new customers, and the impact of low attrition rates The wholesale increase was driven by growth in operating deposits related to client »rtivity in ClB's Treasury Services business, and inflows m ArVM primarily from business growth and the impact of new rules governing money market funds

The Firm believes average deposit balances are generally more representative of deposit trends The increase in average deposils for the year ended December 31. 2016 compared with the year ended December 31, 2015. was predominantly driven by an increase in consumer deposits, partially offset by a reduction m wholesale non-operating deposits, driven by the Firm's actions in 2015 to reduce such deposits. For further discussions of deposit and liability balance trends, see the discussion of the Firm's business segments results and the Consolidated Balance Sheei Analysis on payes 51-70 and pages 43-44. respectively

t 217.619 \ 211,773 1 217.694 \ 710.458

11,181 77.906 1,577 1,760

79,119 71,581

1.107 5.797

79.428 3(1.18?

1.669 1.909

73.760 70.150

4,619 4,317

Total long-term unsecured funding

* 11S.134 1 106.S44 (108,976 t 106 773

Credi: card secumiiation" Other secuiitiMlmns"-*" thlb advances

26,068 J 76.068 228,122 | 721.505

76.0(8 (24.040 224.631 j 215.690

Oilier long-term secured funding**

Total long-term secured funding

Preferred stock"

Common stockholders' equity'"

i, respect niely. ai

ta) iirtuded in beneficial interest issued by consolidated vanabtc interest entities on the Firm's consolidated balance sheets, (b) Prior penod amounts have been revised to conlcrm «ri'.h current period presentation, ic) Excludes federal funds purchased.

d) Eirlixles long.term structured repurchase agirernents of 11.8 billion and f>4 2 billion as ol December 31.2016; halancesof (.* 9 billion and S3 9 billion tot the rears ended December 31.2016 and 2015. respectively

e) rjcludn long teim securities loaned of 112 billion and 113 billion asof December 31, 2016. and December 31.2015. respectively, and aweiage balances ol ll 3 billion and 10 9 billion lor the years tiirJed December 11, Z016 and 7015. respectively

If) Other sec ur it ill [ions includes securitizations ol student bans 11* firm's wholesale businesses also securi;iie loans for client d.-rven transactions, which •ri not considered to lie a source of funding tor Hie I irm and aie not included in the table (£.1 irKludKlong lenn Mrudured notes *hi(li are secured

(h) i ur additional information on preferred stork and common stockholders' equity see Capital Disk Management on nafies 76-85. Consolidated staieneris of changes m nock.holders equity. Note 22 and Note 23 d) During 2015 [he Finn discontinued its commercial popii customer sweep rash management program

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Management's discussion and analysis

Short-term funding

Hit; firms sources o! Slmri-iemi secured lunmng primarily consist ol securities loaned or solo under agreements io repurchase Securities loaned or sold under agreement to lepnircruir are secured predomiiuniiy tiv nrgh-qualily securmes collateral including government-issued debt and agency UBS, and constitute a significant uoition of tne lederai funds purctiased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets The decrease in the average balance ol securities loaned oi sold under agreements to repurchase for the year ended December 31 2016. compared with the balance at Deccmoer 31, 2015 was largely due to lowei secured financing ol trading assets-debl and equity instruments in thfr. CiB relaled io client-driven market-making activities The balances associated witn securities loaned or sold under agreements to repurchase fluctuate over time fine to customers" investment and financing activities, the Firm's demand for financing, the ongoing management of the mix of the Firm's liabilities, including us secured and unsecured financing (for both the investment securities and market-making portfolios), and other market and portfolio factors

Long-term funding and issuance l ong-term funding provides additional sources of stable funding and liquidity for the Firm The Firm's long-term funding plan is driven by expected client activity, liquidity considerations, and regulatory requirements, including 1LAC requirements Long-term lunding objectives include maintaining diversification, maximizing market access and optimizing lunding costs Ihe Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide maximum flexibility in support of both bank and nonbank subsidiary funding needs. The Parent Company advances substantially all net funding proceeds to the inc. The IHC does not issue debt to external counterparties The following table summarizes long-term unsecured issuance and maturities or redemptions ior the years ended December 31.2016 and 2015 For additional information, see Hole 21.

long-term unsecured funding

Senmi noirt itsur-d in non u S markers

29 9B9 I 1.630 2.S94

Suoordiruicd ni-tn

Mil ur itiesv redempi ion

Senior note!

I iu',1 preferred securitii

Siructure-.l noies

101

(51,140 S 41 li

1 he Firm raises secured long-term funding through securitization of consumer credil card loans and advances from ihe FHLBs

The following table summarizes the securitization issuance and ruLB advances and (heir respective maturities or redemption for the years ended December 31, 2016 and 2015

December 31.'

Long-term secured funding

> MjrurltHVRedrrniJcioni

rill R advene il 0:her lone-term

$ 8.777 » 6.807 t 5,0Z5 S 733

17.150 I6.SS0 9.709 455 1.105 2A4S

The Firm's wholesale businesses also secuntizc loans for rlient-dnven transactions, those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above For further description of the client-driven loan securitizations, see Note 16

Credit ratings

The cusi and availability ol financing are influenced bv credit ratings deductions in these ratings could nave an adverse ellect on the Finn's access io liquidity sources, increase the cost ot lunds, trigger additional collateral oi funding requirements and decrease the number ol investors and counterparties willing io lend to the Mrm Additionally, the firm's funding reciui cements 'f '"Cs and other tfiird-

The credit ratings of the Parent Company and ihe Firm's principal bank and non hank subsidiaries as of December 31. 2016 were as follows

JMMgan Chase A Cd

Stable Starjle Stable

Stable Stable

Moody's Irweslurs Sc-rvi:r Standard K Pur's retch Ratings

(a) On February £7. 7017 MHxW's nub'-sned ik updated rating methodologiss In sc Srrunlies LLC's long term issue' was onwr^ranrd by one notch Irum Aal ir remained stable.

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced as noted above The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral (actors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes that it maintains sufficient liquidity to withstand a potential decrease m funding rapacity due to ratings downgrades

JPUorgan Chase's unsecured debt does noi contain requirements lhat would call for an acceleration of payments, maturities or changes m the structure of the existing debt, provide any limitations on luture borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price

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Management's discussion and analysis

MARKET RISK MANAGEMENT

Market nsk is the risk of loss arising (10m potential adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as inteiest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market Risk Management

Market Risk Management monitors market risks throughout the Firm and defines market risk policies and procedures. Th* uarket Risk Management function reports to the Firm's CRO

Market Risk Management seeks to manage risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators Market Risk Management is responsible for the following functions

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk measurement Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, to assess risk including

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- loss advisories
- Profit and loss drawdowns
- Earnings-at-risk
- Other sensitivities

Risk monitoring and control

Market risk exposure is managed primarily through a Series of limits set m the context of the market environment and business strategy in setting limits. Ihe Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and mav be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns Limits may also be set within the lines ol business, as well at the ponlolio or legal entity level.

Market Risk Management sets limits and regularly reviews and updates (hem as appropriate, with any changes approved by line of business management and Market Risk Management Senior management, including the Firm's CEO and CRO. are responsible for reviewing and approving certain of these risk limits on an ongoing basts All limits that have not been reviewed within specified limp periods by Market Risk Management are escalated lo senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported

Limit breaches are required to be reported in a timely manner to limit approvers. Market Risk Management and senior management In the event of a breach, Market Risk Management consults with Firm senior management and the line of business senior management lo determine the appropriate course of action required to return to compliance, which may include a reduction in risk 111 order to remedy the breach. Certain Firm or line of business-level limits that have been breached for three business days or longer, or by more than 30%. are escalated to senior management and the Firmwide Risk Committee.

The following table summarizes by line of business the predominant business activities that give rise to market risk, and the primary market risk management tools utilized to manage those risks.

- Services mor tgage loans which give ni" 10 complw. non linen Inttresl rate and tasis risk - Hon linear risk arises primarily

Risk identification and classification by line of business 'to*tetoexh>Mhti

' Mortgage pipeline loans, datufied as

embedded m inorrgAfes and chafes m lhe probabiliiy of newtf eripnaled mar (cage commitments actual If closing [1] Basil rtik ics-jhs from differences m the retaiive

dtrrvilrves ■ Warehouse loans, claullied as trading

essels-debt instruments - VSBl

Interesi-onry securities, classified n trading tsuts - debt wstrumenii. and related hedgei. classified as

measured it fair value

Trading assets/tlabilities - deM and marketable equity instruments, and dermlivev including hedges of lhe retained loan portluki Certain securities purchased, loaned or vJC under retalt agreements and

' Market risk amci front changes in market prices (e.g talus and credil spreads) resulting in a poteniial decline ir. ori income

' Intakes in traditional wholesale banki.-ig activities which include euensioni of loans and crerili facililwi and liking deposits

- Riu antes lrom changes in Interesi rates and prepayment risk nil! potential tor adverse impact on net interest income and

PorUolio and related intents! nit hedges

- Long nrm debt and relaled interest lalt

Provides initial capital - Debt securities held in advance of

Investments« produQi uch as distribution to clients, claisltied as

mutual lunds. wharii pv» rise to trading assets - debt and equity

market risk anting Irom changes irotrumenis

In market prices a such produai
- Foreign exchange eiposur* related to Firm-issued non-US long term debt ("Lib') and
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As part of the Firm's evaluation and periodic enhancement of its market risk measures, during the third quarter of 2016 the Firm refined the scope of positions included in risk management VaR. in particular, certain private equity positions in (he CiB, exposure arising from non-U S. dollar denominated funding activities in Corporate, as well as seed capital investments in AWM were removed (roni the VaR calculation Commencing with the third quarter of 2016, exposure arising from these positions 15 captured using other sensitivity-based measures, such as a 10% decline in market value or a 1 basis point parallel shift in spreads, as appropriate For more information, sep Other sensitivity-based measures at page 123. The Firm believes this refinement 10 its reported vaR measures more appropriately captures the risk of its market risk sensitive instruments Ihis change did not impact Regulatory VaR as these positions are not included in the calculation ol Regulatory VaR. Regulatory VaR is used to derive the Firm's regulatory VaR-based capital requirements under Basel III

Management's discussion and analysis

value at-nsh

tf'Moigaii Chase utilizes vaH j stai-surai risk measure io estimate [he rJoienti.ii <http://rJoienti.ii> loss from adverse market moves m a normal market environrrient The ᶠinn has a single vaR iramework used as a basis lor calculating Risk Management vaR and Regulatory vaR

The framework is employed across ihe f irm using historical simulation Dated on daio for the previous 12 months Ihe framework's approach assumes thai historical changes m market values are representative ol ihe distribution ol potential outcomes in the immediate future Tne Firm believes the use ol Risk Management VaR provides a stahie measure ol VaH that is closely aligned to the day-to-day risk management decisions made by the lines ol business, and provides the appropriate information needed to respond to risk events on a daily basis

the Firm's Risk Management vaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level Risk Management VaR provides a consistent tiamcwoik to measure risk profiles and levels of diversification across product types and is ust;d for aggregating risks and monitoring limits across, businesses Those VaR results are reported to senior management, ihe Hoaid of Directors and regulators.

Under the Firm's Risk Management vaR meihodology. assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "back-testing exceptions." defined as losses greater than that predicted by VaR estimates, on average five times every 100 trading days The number of VaR back-testing exceptions observed can diflcr from the statistically expected number of back-iesting exceptions if the current level of market volatility is materially different from the level of market volatility during the 12 months ol historical data used m the vaR calculation.

Underlying the overall VaR model framework are individual vaR models that simulate historical market returns for individual products ana/or risk factors To capture material market risks as part of ihe F irm's risk managemenl Iramework, comprehensive vaR model calculations are performed daily lor businesses whoso activities give rise to market risk These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period, inputs are selected based on the nsk profile of each portfolio, as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the firm level

Since vaR is hawd on historical da:a n is an imperfect measure of market risk e«nosiue and potential losses, and it is not used to estimate the impact ot stressed market conditions oi to manage any impact fio:n potential stress events in addition based on their reliance on available historical data, limited time horizons and other faciois, VaH measures are inherently limned in then ability to measure certain risks and io predict losses particularly those associated with market illiquidity and sudden or severe shifts in market conditions

Tor cenam products, specific risk parameters arc- noi captured in VaR due to the lack of inherent liquidity and avaiiahiliiy of appropriate historical data The Fum uses proxies to estima'.e the vaR lor these and other rrnducts when daily lime series are noi available It is hkwy thai using an actual price-based lime series lor these products il available, would affect the VaR results presented The rirm iheiclore considers other measures such as stress testing, in addition to VaR, to capture and manage its markei nsk positions

The daily market data used m Van models may be different than me independent third-party data collected for VCG price testing m its monthly valuation process For example, in cases where market prices are not observable, or where proxies are used in VaR historical lime series, the data sources mav differ (see Valuation process in Note 3 lor further information on the Firm's valuation process) Because vaR model calculations require daily data and a consistent source for valuation, it may not be practical to use the data collected in the VCG monthly valuation process for vaR model calculations The F irm's vaR model calculations are periodically evaluated and enhanced m response to changes in the composition of the rirm's portfolios, changes m market conditions, improvements in the rirm's modeling techniques and measurements, and other factors Such changes may affect historical compansons of VaH results For information regarding model reviews and approvals, see Model Risk Management on page 128

The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory vaR"). which is used to derive the Firm's regulatory VaR-based capital requirements undei Basel m. This Regulatory VaR model f rameworтc currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level Regulatory vaR is applied to "covered" positions as defined by Basel Hi. which may be different than the positions included m the Firm's Risk Management VaR For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR. while Regulatory vaR excludes these credit derivative hedges in addition, in contrast to the Firm's Risk Management VaR. Regulatory VaH currently excludes the diveisilication benefit loi certain VaR models

Pillar 3 Regulatory Capital Disclosures reports which a available on the Finn's wensne at (httn // investoi shareholder.! nni/jpmorgancfidse/basol cfm)

For additional information on Regnlatoiy vaR and the oihei components ot market risk regutaioi y capnal lor the Firm te g VaR-nased measure, stressed vaR-based measure and the respective hackiesnngi see JPMorgan Chase's Basel in

Ihe table helow shows the results ol the rirm's Risk Management VaR measure using a 95% confidence level

iding VaR by ink type

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rt less than the sum ai it* va* ol [he components described abo> not perhcth' correlated

n may occui on diifrrew days for dnt.net <http://dnt.net> rrsk cumrjonenls. and he

The Firm's average Total VaR diversification benefit was SS million or 18% of the sum for 2016. compared with J10 million or 21% of the sum for 2015. '

The Tirm continues to enhance its VaR model calculations and the time series inputs related to certain asset-backed products.

VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change

VaR back-testing

The Firm evaluates the effectiveness of us VaR methodology by back-testing, which compares the daily Risk Management vaR results with the daily gams and losses recognized on market-nsk related revenue.

The Firm's definition of market risk-related gams and losses is consistent with the definition used by the banking regulators under Basel III Under this definition market r isk-related gams and losses are defined as gains and losses on the positions included in the Firm's Risk Management vaR, excluding fees, commissions, certain valuation adjustments (e g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading.

Management's discussion and analysis

The following chart compares the daily market risk-related gains and losses with the Firm's Risk Management VaR for the year ended December 31. 20i6 as the Chan presents market risk-related gams and losses related to those positions included in the Firm's Risk Management VaR, the results m the table below differ from the results of back-testing disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the year ended December 31. 2016 the Firm observed 5 vaR back-testing exceptions and posted Market-risk related gains on 151 of the 260 days, m this period

Dally Market Risk-Related Cains and Losses
vs. Risk Management VaR (1-day, 95% Confidence level)
Vear ended December 31, 2016

■aewava Market Risk-Related Gains and Losses Risk Management VaH

Other risk measures Economic-value stress testing Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the nsk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates and commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events The stress framework calculates multiple magnitudes of potential stress for both market rallies and market seff-offs for each nsk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to (hose historically realized, and to stress test the relationships between market prices under extreme scenarios. Stress scenanos are defined and reviewed by Marke(Risk Management, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions

Stress-test results, trends and qualitative explanations based on current market risk positions are reported (o ihe respective LOBs and the Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. Results are also reported to the Board of Directors

The rirm's stress testing framework is utilized in calculating results undei scenarios mandated by the Federal Reserve's CCAR and ICAAP processes In addition, the results are incorporated into the quarterly assessment of the Firms Risk Appetite Framework and are also presented to the DRPC.

Nonstatistical risk measures Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values These measures piovide granular information on the Firm's markei risk exposure They are aggregated by line of

business and by nsk type, and are also used for monitoring internal market risk limits.

Loss advisories and profit and loss drawdowns
Loss advisories and prolit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Earnings-at-risk
The VaR and sensitivity measures described above illustrate the economic sensitivity ol the Firm's Consolidated balance sheets io changes in market variables The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from ihe Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-nsk. which measures the extent to which changes in interest rates will affect the Firm's net interest income and certain interest rate-sensitive fees For a summary by line ol business, identifying positions included in earnings-at-nsk, sec the table on page 117.

The CTC Risk Committee establishes the Firm's structural interest late risk policies and market risk limits, which are subject to approval by the DRPC Treasury and CIO, working in partnership with the lines ol business, calculates the Firm's structural interest rate risk profile and reviews il with senior management including If ie CTC Risk Committee and the Firm's ALCO In addition, oversight of structural mteirst rate risk is managed through a dedicated nsk function reporting to the CTC CRO 1 his risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits tor structural interest rate risk 1 he Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in (he maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

Hie i-irni manages cliff';: rait OM'C'Siirt- related 10 US assets -ind liabilities on a copsolidated himwide basis Business units ;ransler their mierest rate nsv id Treasury ana no through a iransiei-imcing system winch takes into account the elements ol micresi rate exposure that can he ris* -managed m financial markets These elements mtlurle asset and liability haiances and contractual rates of imprest contractual p,-t(tcv;'a/ paymcm schedules exofciecf picpayment experience interest rate reset dates and maturities, rate indices used lor repricing, and any interest rate ceilings or floors for adjustable rate products All transfer-pricing assumptions are dynamically leviewed Thf. Firm generates a baseline for npt interest income and reriam mi crest rate sensmve tees, and then umducts sniiuiations of changes for interest rare-sensitive assets and liabilities denominated in U S dollar and other currencies ("non-U.S dollar" currencies) Earnings-at-risk scenarios estimate the potential change in this baseline, ovei the loi lowing 12 months utilizing mtilnnle assumptions These scenarios consider the imparl on exposures as a result ol changes m interest rates lrom baseline rates, as well as pricing sensitivities of deposits, oplmnaltiy and changes in product mix The scenarios include lorc-casted halance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions that could be taken by the Firm in response to any such instantaneous rate changes Mortgage prepayment assumptions are based on scenario interest rates romparcd with underlying contractual rates, the lime since origination, and other (actors which are updated periodically based on historical experience Ihe Firm's earnings at-nsk scenarios are periodically evaluated and enhanced in response lo changes m the composition of the firm's balance sheet, changes m market conditions, improvements in ihe Firm's simulation and other factors
Trie firm's u S doiiai sensitivities aie presc-nieo m -ne table helo* The non-U S oolljr sensitivity scenarios are .mi material to (he Fum s earnings at-nsk at December 31 20J6and 2015

JPMorgan Chase's 12-month earnings-at-nsk sensitivity profiles
115, dollar 'mianunrows rftarce in lalri

The Finn's henefu lo using rates on u S dollar assets and liabilities is largely a resul! of reinvesting at higher yields and assets (epncing at a faster pace lhan deposits

The Finn's net u S dollar sensitivity to a ?00 hps ano 100 bps instantaneous increase m rates decreased by appro'irriaieiy SI ?. billion and $700 million, rcsnecnveU[1]. when compared to December 31.2015 The primary driver ot that decrease was the updating of the Firm's baselme to reflect higher interest rates As higher interest rates are reflected m the Firm's baselines, the magnitude ol the sensitivity to further increases in rates would be expected to be less Significant the net change in mix m the Firm's spot and forecasted balance sheet also contributed to a decrease in the net tl S dollar sensitivity when compared to December 31. 2015

Separately, another u S dollar interest rate scenario used by the Firm - involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates slaying ai current levels - results in a 12-momfi benefit (o net interest income ol approximately $800 million The increase under this scenario reflects the rum reinvesting at the higher long-term rates, with funding costs remaining unchanged The result ol the comparable non-U S dollar scenario was not material to the Firm

Non-U.S. dollar foreign exchange rrsk Non-U S dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assels or liabilities or future results. The Firm has structural non-U S dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and non-U.S dollar-denominated debi issuance Treasury and CIO, working in partnership with the lines ol business, primarily manage these risks on behalf of the Finn Treasury and 00 may hedge certain of these risks using derivatives within risk limns governed by the CTC Risk Committee

Other scrtsitivKvbased measures
Ihe Firm quantifies the market risk ol renam investment and funding activities by assessing me uoleiin.il impact op- n?t revenue and OCI dug to changes in relevant market variables Fur additional mformanon on [he positions cammed in oilier scnsitivitv-oaseil measures please relet to the Risk identification and classification table on page l] 7

ihe tahle below represents the potential impact io net revenue or OCI lor market nsk sensitive instruments that are no: included in VaR or carmngs-at-nsk Wheie appropriate instruments used lor hedging purposes are reported along with the positions bong hedged The svrisinvities disclosed in ihe table befoiv may not be represeniative of die actual Bam or loss thai would nave been realized a; Oecember 31. 20)6. as the movement in market parameters across maturities may vary and aie not intended to imply management's expectation of future deterioration in these sensitivities
management activities

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Primarily represents the loiricn r>change revaluation on the (an value of the derivative hedges

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Management's discussion and analysis

PRINCIPAL RISK MANAGEMENT

Principal investments are predominantly privately-held financial assets and instruments, typically representing ownership or junior capital positions, that have unique risks due to then illiquidity or for which there ts less observable market or valuation data Such positions are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments Principal investments cov<>r multiple asset classes and are made either in standalone investing businesses or as pari of a broader business platform Asset classes include tax-oriented investments (e-g.. affordable housing and alternative energy investments), private equity and various debt investments. Increasingly, new principal investment activity seeks io enhance or accelerate fine of business strategic business initiatives.

The Firm's principal investments are managed under various lines ol business and are reflected within the respective LOBs financial results. The Firm's approach to managing principal risk is consistent with the Firm's general nsk governance structure A Firmwide risk policy framework exists (or all principal investing activities. All investments are approved by investment committees lhat include executives who are independent from the investing businesses. The Firm's independent control functions are responsible lor reviewing the appropriateness of the carrying value of principal investments in accordance with relevant policies. Approved levels for such investments are established for each relevant business in order to manage the overall size ol the porllolios. Industry, geographic and position level concentration limits arc in place and are intended to ensure diversification of the portfolios The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events

COMPLIANCE RISK MANAGEMENT

Compliance risk is the risk of failure to comply with applicable laws, rules and regulations

Overview

Each tine of business is accountable for managing its compliance risk The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with senior management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers. These compliance risks relate to a wide variety of legal and regulatory obligations, depending on the line of business and the jurisdiction, and include those related to products and services, relationships and interactions with clients and customers, and employee activities For example, compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying wilh the rules and regulations related to the offering of products and services across jurisdictional borders, among others

Other Functions such as Finance (including Tax), Technology and Human Resources provide oversight of significant regulatory obligations that are specific to their respective areas of responsibility.

Compliance implements various practices designed to identify and mitigate compliance risk by establishing policies, testing, monitoring, training and providing guidance

in recent years, the Firm has experienced heightened scrutiny by its regulators ol its compliance with regulations, and with respect to its controls and operational processes. In certain instances, the Firm has entered into Consent Orders with its regulators requiring the Firm to take certain specified actions to remediate compliance with regulations and improve its controls. The Firm expects that such regulatory scrutiny will continue.

Governance and oversight

Compliance is led by the Firms' CCO who reports, effective September 2016, to the Firm's CRO The Firm maintains oversight and coordination of its Compliance Risk Management practices through the Firm's CCO, lines of business CCOs and regional CCOs to implement (he Compliance program globally across the lines of business and regions. The Firm's CCO is a member of (he FCC and the FRC. The Firm's CCO also provides regular updates to the Audit Committee and DRPC in addition, from time to time, special committees of the Board have been established to oversee the rirm's compliance with regulatory Consent Orders.

The Krm has m place a Code of conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity - or give the impression that he or she has The Code requires prompt reporting of any known or suspected violation of the Code, any internal Finn policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates (he underlying principles of the Code, by any of the Firm's employees, customers, suppliers, contract workers, business partners, or agents Specified empfoyeei are specially (rained and designated as "code specialists" who act as a resource to employees on Code matters In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code. The Code and the associated employee compliance program are focused on the regular assessment of certain key aspects of the Firm's culture and conduct initiatives

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CONDUCT RISK MANAGEMENI

Cyndi.iri risk is ihe nsk th.iT .in emplcyee s at::un oi inaction causL-s undue harm to ;:iL' Firms cl.ems and customers carnages market integrity, undermines the Fi.-ni s reputation or negatively impacts the rirm's culture

Overview

Cacti line ol business or limn ion is accountant? for identifying and managing us conducl risk :o provide appropriate engagement, ownership and susi a inability of a culture consistent with the Firm's How we Do Business Principles ("Pi maples"! The Pi maples serve as a guide for how employees are expected to conducl themselves. With the Principles serving as a guide, the Firms Code sets out the Fjrm's expectations tor each employee and provides certain information and the resources 10 help employees conduct business ethically and in compliance wuh ihe law everywhere the Firm operates For further discussion of the Code, see Compliance Risk Management on page 125

Governance and oversight

The CMDC is the primary Board-level Commillee that oversees the Turn's culture and conduct programs the Audit Commmee has responsibility to review ihe program established by management that monitors compliance with the Code Additionally, the DRPC reviews, at least annually, the Firm's Qualitative factors included in the Risk Appetite Framework, including conduct risk Ihe DRPC also meets annually with the CMDC to review and discuss aspects of the firm's compensation practices.

ConOuri nsfc management is incorporated into various aspects of people management practices thioughou; :nc employee tile cycle, ncludng iec tuning onboarrimg training ,uin development, perlormance management, p-omotion and compensation processes Businesses undertake annual Risk and Control Sell-Assessment ("HCSA") assessments, and, as part of these RCSt reviews, they identify their respective key inherent operational risks (including conduct risks) evaluate the design and effectiveness of then controls, identity control gaps and develop associated action plans The Firm's Know Your Employee framework generally addresses how the f irm manages, oversees and responds to workforce conduct related mailers that may otherwise expose the Firm to financial reputational. compliance and oihei operating risks The Firm also has a HR Control Forum, the primary purpose o! winch is to discuss conducl and accountability for moie significant risk and control issues and review, when appropriate, employee actions including but not limited to promotion and compensation actions

Legal risk is ihe risk ol loss or imposition nl damages, fines penalties or other liahility arising fiom (he failure to comply w;tn a contractual obligation or to comply win laws, rules or regulations to which the firm is suhiect

Overview

in jodidop 10 providing legal services and advice to the Finn, and communicating and helping the lines of business adjust lo the legal and regulatory changes ihev face, including the heightened scrutiny and expectations ol the Firm's regulators, the global Legal function is responsible for working with the businesses and corporate functions to fully understand and assess their adherence to laws, rules and regulations, in particular. Legal assists Oversight & Control, Risk. Finance, Compliance and Internal Audi) in their efforts to ensure compliance with all applicable laws and regulations and the Firm's corporate standards for doing business The Firm's lawyers also advise the Firm on potential legal exposures on key litigation and transactional matters, and perform a significant defense and advocacy role bv defending the Firm against claims and potential claims and. when needed, pursuing claims against others In addition, they advise the Firm's Conlhcts Office winch reviews the Firm's wholesale transactions that mav have the potential to create conflicts of interest for the Firm

Governance and oversight

The Firms General Counsel reports to the CFO aid is a member ot Ihe Opcraung committee me riimwide Risk Commmee and ihe FCC The Genera! Counsel s leadership team includes a General Counsel lor each line ol business, the heads of the Litigation and Corporate & Regdatory practices, as well as the Firm's Corpoiate Secretary fach region (c g., Latin Amenta. Asia Pacific) has a General Counsel who is responsible lor managing legal nsk across all lines of husmess and luncnons m ihe region

legal works with various committees (including new business initiative and reputation risk committees) and the Firm's businesses to protect the Firm's reputation beyond any particular legal requirements irMorgan Chase A Cn.//016 Annual Deport

OPERATIONAL RISK MANAGEMENT

Model risk is the potential for adverse consequences Irom decisions based on incorrect or misused model outputs.

The Firm uses models across various businesses and (unctions. 1 he models are of varying levels of sophistication and are used for many purposes including, for example, the valuation of positions and the measurement of risk, such as assessing regulatory capital requirements, conducting strest testing, and making business decisions

Mode) nsks are owned by the users of the models within the various businesses and functions in the Firm based on the specific purposes of such models. Users and developers of models are responsible for developing, implementing and testing their models, as well as referring models to the Model Risk function for review and approval Once models have been approved, model users and developers are responsible for maintaining a robust operating environment, and must monitor and evaluate the performance of the models on an ongoing basis Model users and developers may seek to enhance models m response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities

The Model Risk function reviews and approves a wide range of models, including risk management, valuation and regulatory capital models used by the Firm The Model Risk function is independent of model useis and developers The Firmwide Model Risk executive reports to the Firm's CRO Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on ihe model This tiering is subject to the approval of the Model Risk function A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The (actors considered m reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market when reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant model tier

Under the Firm's Model Risk Policy, the Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment tn certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's model risk policy to allow a model to be used prior to review or approval The Model Risk function may also require the user to take appropriate actions to mitigate the model risk if il is to be used in the interim These actions will depend on the model and may include, lor example, limitation ol trading activity

For a summary of valuations based on models, see Critical Accounting Estimates Used by Ihe Firm on pages 132-134 and Note 3

Operational risk is the risk ol loss resulting from inadequate or failed processes or systems, human factors or due to external events that are neither market- nor credit-related Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate employee behavior, failure to comply with applicable laws and regulations or failure of vendors to perform m accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damages to the Firm The goal is to keep operational risk at appropriate levels in light of the Firm's f inancial strength, [he characteristics of its businesses, and the markets and regulatory environments in which it operates.

Operational Risk Management Framework

To monitor and control operational risk, the Firm has an Operational Risk Management Framework which is designed to enable the Firm to maintain a sound and well-controlled operational environment. The ORMT is comprised of four mam components: Governance. Risk Assessment. Measurement, and Monitoring and Reporting

Governance

The lines ol business and corporate functions are responsible for owning and managing their operational risks. The Firmwide Oversight and Control Group, which consists of control officers within each line of business and corporate function, ts responsible for the day-to-day execution of the ORMF

Line ol business and corporate function control committees oversee the operational risk and control environments of their respective businesses and functions These committees escalate operational risk issues to the FCC. as appropriate For additional information on the FCC. see Emerpnse Risk Management on pages 71-75

The Firmwide Risk Executive for Operational Risk Governance ("ORG"), a direct report to the CRO, is responsible lor defining the ORMF and establishing minimum standards for its execution Operational Risk Officers report to both the line of business CROs and to the Firmwide Risk Executive lor ORG, and are independent of the respective businesses or corporate functions they oversee.

The Firm's Operational Risk Appetite Policy is approved by the DRPC. 1 his policy establishes the Operational Risk Management Framework for the Tirm. The assessments of operational nsk usmg this framework are reviewed with the DRPC.

ffrsk assessment

The Firm utilizes several tools to identify, assess, mitigate and manage its operational risk One such tool is the RCSA program which is executed by LOBs and corporate functions in accordance with the minimum standards established by ORG. As part of the RCSA program, lines ol business and corporate functions identify key operational risks inherent in their activities, evaluate the effectiveness of relevant

controls in place to mitigate identified nsks. and define actions to reduce residual nsk. Action plans are developed for identified control issues and businesses are held accountable for tracking and resolving issues in a timely manner Operational Risk officers independently challenge the execution ot the RCSA program and evaluate the appropriateness of the residual risk results in addition to the RCSA program, the Firm tracks and monitors events that have or could lead to actual operational risk losses, including liugation-related events Responsible businesses and corporate functions analyze their losses to evaluate the efficacy of their control environment to assess where controls have failed, and to determine where targeted remediation efforts may be required ORG provides oversight of these activities and may also perform independent assessments of significant operational risk events and areas of concentrated or emerging risk.

Ucasurement

in addition to the level of actual operational risk losses, operational risk measurement includes operational risk-based capital and operational risk losses under both baseline and stressed conditions.

The primary component of the operational risk capital estimate is the Loss Distribution Approach ("LDA'i statistical model, which simulates the frequency and seventy of future operational risk loss projections based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level The IDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even alter the issues or business activities giving rise to the losses have been remediated or reduced

As required under the Basel in capital framework. Ihe Finn's operational risk-based capital methodology, which uses the Advanced Measurement Approach, incorporates internal and external losses as well as management's view of tail risk captured through operanon.il <http://operanon.il> risk scenario analysis, and evaluation of key business environment and internal control metrics.

The Firm considers the impact ol stressed economic conditions on operational risk losses and develops a forward looking view of material operational nsk events that may occur in a stressed environment The Firm's operational risk stress testing framework is utilized tn calculating results for the Firm's CCAR and icaap processes.

For information related to operational risk RWA, CCAR or icaap. sec Capital Risk Management section, pages 76-85

IPWorganCluse t CO-/Z01 t. Annual ttcpon

Management's discussion and analysis

Uoiuiortiig and fcrtfjf nng

ORG has established standards lor consistent operational risk reporting. Ihe standards also leininrce escalation protocols to senior management and to the Board ol On ectors 0 ye rational risk reports are produced on a firmwide basis as well as by line nl business and certiorate function

Other operational risks

As mentioned previously operational nsk can manifest it sell in various ways Risks such as Compliance risk Condurt risk Legal risk and Model risk as well as other operational risks, can lead to losses wnirh are captured through the l irm's operational risk measurement processes More information on compliance risk. Conducl nsk. Legal risk and Model risk an; discussed on pages 125. l ?f>. 127 and 5 2fi. respecilvely Details on other select operational risks arc provided below CYtwsecitfity risk

The Firm devotes significant resources to protect the security ol the Firm's computer systems, soltware. networks and other technology assets The Firm's security ollorts are intended to protect agamst cybersecunty attacks by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service sabotage systems or cause other damage The Firm continues to make Significant investments in enhancing its cyber defense capabilities and to strengthen its partnerships with the appropriate government and law enforcement agencies and other husincsses in order to understand the full spectrum of cybersecunty risks in the environment, enhance defenses and improve resiliency agamst cybersecunty threats Third parties with which the Firm does business oi that facilitate the Firm s business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecunty risk to the Firm Third party cybersecunty incidents such as system breakdowns or failures, misconduct by the employees of such parties, or cyberattacks could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients Clients can also be sources of cybersecunty risk to the Firm, particularly when their activities and systems are beyond the Firm's own security and control systems However, where cybersecunty incidents are due to client lailure to maintain the security of their own systems and processes, clients will generally be responsible for losses incurred

To protect the confidentiality, integrity and availability ol the Firm's infrastructure, resources and information, the Firm leverages the ORMF to ensure nsks are identified and managed within defined corporate tolerances The Firm's Board ol Directors and the Audit Commmee are regularly briefed on the Firm's cybersecunty policies and practices as well as its efforts regarding significant cybersecunty events

Payment fraud risk

Payment fraud risk is the risk of external and internal Parties unlawfully obtaining personal benefit at the expense of the Firm. Over the past year, the risk of payment fraud has increased across the industry, with the number ol

attempts hitung recruit highs The complexities of these attacks along with perpetrators' sirategies continue to evolve * Payments Control Program has been established that includes Cvbersecunty. Operations Technology Rist and the lines of business to manage the risk, implement coimols and provide dn-ni education and awaieness training. The program monitors and measuies payment fraud activity, evaluates the Fum's rvbersecimsy delenses. limits access io sensitive daia. and provides training to hoth employees and clients Third-party outsourcing risk

lo identify and manage the opeianonal risk inherent m its outsourcing activities, the Finn has a Third-Party Oversight ("TPO"l framework lo assist lines o! business and torporate functions in selecting, documenting, onboarding. monitoring and managing tiieir supplier lelanonships The objective of the TPO framework is to hold third patties to the same high level of operational performance as is expected ot the Firm's interna! operations The Third-Party Oveisight group is responsible for Fumwide TPO n aming, monitoring i sporting and standards

Business and technology resilience nsk Business disruptions can occur due to forces beyond the Firm's control such as severe weather power or telecommunications loss, flooding, transit strikes, terrorist threats or infectious disease The safety of the Firm's employees and customers is o! the highest priority The Firm's global resiliency program is intended to ensure that the Firm has the ability io recover its critical business lunctions and supporting assets 0 e. stall, technology and facilities) in the event ot a business interruption The progiam includes corporate governance, awareness and naming, as well as strategic and tactical initiatives 10 identify, assess, and manage business interruption and public salctv risks

The sirength and proficiency of the Fum's global resiliency program has played an integral ■ Die in maintaining the Firm's business operations during and quickly alter various events insurance

One of (he ways operational loss may be mitigated is through insurance maintained by (he Firm The Firm purchases insurance to be in compliance with local laws and regulations (e g., workers compensation), as well as to serve other needs (e.g. property loss and public liability) insurance may also be required by third parties with whom the Firm does business The insurance purchased n reviewed and approved by senior management

REPUTATION RISK MANAGEMENT

Reputation risk is ;he risk thai an action, transaction, investment oi event will reduce trusi in the Firm s integrity or competence by its various constituents including clients, counterparties investors, regulators employees and the broader public. Maintaining the Firm's reputation is the responsibility ol each individual employee of the Firm. The Firm's Reputation Risk Governance policy explicitly vests each employee with ihe responsibility io consider the reputation of ihe Firm when engaging in any activity Since the types of events thai could haim the I irm's reputation are so varied across the Firm's lines ol business, each line ot business has a separate reputation nsk governance

infrastructure in place which consists ol three key elements dear documented escalation enter id appropriate to the business, a designated primary discussion forum - m most rases, one or more dedicated reputation risk committees, and a list nl designated contacts to whom questions relating io reputation nsk should he rptened Line ol business reputation nsk governance is overseen by a Firmwide Reputation Risk Governance function which piovides oversight ol the governance uitrastruciuie and process to support the consistent identification, escalation, management and monitoring of reputation risk issue* firmwide

IPMorgan Chase h Annual Repon

Management's discussion and analysts

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to penod The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and (he related business and nsk management strategics, which may vary across the Firm's businesses and portfolios, in addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner The Firm believes its estimates tor determining the carrying value of its assets and liabilities are appropriate The following is a brief description of the Firm's critical accounting estimates involving significant judgments Allowance for credit losses
JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as (he Firm's wholesale and certain consumer lending-related commitments. The allowance tor loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as ol the balance sheet date Similarly, the allowance for lendmg-rejated commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of (he balance sheet date

The allowance for credit losses includes a formula-based component, an asset-specific component, and a component related to PCi loans The determination of each of these components involves significant judgment on a number of matters For further discussion of these components, areas of judgment and methodologies used in establishing the Firm's allowance for credil losses, see Note 1S.

Allowance for credit fosses sensitivity The Firm's allowance lor credit losses is sensitive lo numerous factors, which may differ depending on the pqrtfolio Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet dale. The Firm uses its best judgment lo assess these economic conditions and loss data in estimating the allowance foi credit losses and these estimates are subject lo periodic refinement based on changes to underlying external or Firm-specific historical data The use of alternate estimates, data sources, adjustments to modeled loss estimates for model imprecision and other factors would result in a different estimated allowance for credit losses

To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on Ihe Firm's modeled credit loss estimates as of December 31,2016, without consideration of any offsetting or correlated effects ol other inputs in the Firm's allowance lor loan losses'

- For PCI loans, a combined 5% decline m housing prices and a 100 basis point increase in unemployment rales from current levels could imply an increase to modeled credit loss estimates of approximately $600 million.
- For the residential real estate portfolio, excluding PCI loans, a combined 54fa decline in housing prices and a 100 basis point increase tn unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately Ji2b million
- For credit card loans, a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately 1900 million
- An increase in PD lactors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately J2 3 bilhon
- A too basis point increase in estimated LGD for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates ot approximately J175 million

The purpose ol these sensitivity analyses is to provide an indication ot the isolated impacts of hypothetical alternative assumptions on modeled loss estimates The changes in Ihe inputs presented above are not intended to imply management's expectation of future deterioration of (hose risk factors in addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled foss estimates based on then-current circumstances and conditions

Il is difficult to estimate how potential changes in specific, factors might affect Ihe overall allowance for credit losses because management considers a variety of factors and inputs m estimating the allowance for credit tosses Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be dircctionally inconsistent, such lhat improvement in one factor may oflset deterioration in other factors In addition, il is difficult to predict how changes in specific economic conditions or assumptions could alfect borrower behavior or other factors considered by management in estimating ttie allowance tor credit losses. Given (he process the Firm

follows and the judgments made in evaluating the risk factors relaled to its loss estimates, management believes that its current estimate ol the allowance for credit losses is appropriate

Fair value of financial Instruments, MSRs and commodities inventory
JPMorgan chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value ot the underlying collateral. Assets measured at fair value
The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy For further information, see Note 3

	ioi'd'as^'al'.-.'lotallevel;
Trading aurti	
AFS securities	
MSRs	
Private equity investments"	
Oliver	
Total ettett measured jt Mr rak* tm a recurring hash	
Total assets measured al fair value on nnrif ecurring basil	
Total assets measured at fair value	
	3 7%

a) Tor purposes of table above, the derivative receivables total reflects the impact ol neuing adjustment!, however, the (5 8 billion of derivative iecetvablesclas^riedaslew<3donivjiiefiec;tr«[Wttinea(IrWnierii as such netting is not relevant toa presentatwn based un Hie transpatency of Inputs to (he valuation a', an asset. The level 3 balance* would be reduced il netting weie applied, including the netting bene In associated with cash collateral
b) Private equity insuumciits represent investment within lw|iyrate

Valuation
Details of the Firm's processes for determining fair value are set out in Note 3. Estimating fair value requires the application of judgment The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgmenis used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels I and 2

In arriving at an estimate of lair value for an instrument within level 3, management must first determine the appropnate model to use Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3.

For instruments classified in levels 2 and 3. management judgment must be applied to assess the appropriate level ol valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the nel open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or wilhm the market as a whole. For further discussion of valuation adjustments applied by the Firm sec Note 3.

Imprecision m estimating unobservable market inputs or other factors can affect Ihe amount of gam or loss recorded for a particular position Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, (he methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios
The Firm uses various methodologies and assumptions in the determination of (air value. The use of methodologies or assumptions different than (hose used by the Firm could result in a different estimate of fair value al (tie reporting date For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3 Goodwill impairment
Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Nole 17 Management applies significant judgment when estimating the fair value of its reporting units Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, (b) long-term growth rates and (c) the estimated market cost of equity. Imprecision in estimating these factors can alfect the estimated fair value of the reporting units Based upon the updated valuations for all of its reporting units, the Firm concluded that the goodwill allocated to its reporting units was not impaired at December 31, 2016 Ihe fair values of these reporting units exceeded their carrying values by approximately 10% -130% for all

rcDorimg units and dif! noi indicate .i significant risk ol goodwill impairment nased un current ptujecnons and valuations

The projections lor all of ihe Firm's ({'porting unus are consistent with management's runent shon-term business ouuook assumptions and in ihe longer term incorporate a set of macroeconomic assumptions and the Fum's best estimates ol long-term giowth and returns nn etiuuv of us businesses Where possible, ihe Firm uses third-party and peer data to benchmark its assumptions and estimates Declines m business perlonnance. increases m credit losses, increases in equity capital requirements, as wef! as deterioration in economic or market conditions, adverse estimates ol regulatory or legislative changes o' increases in the estimated markei cost ol equity could cause the estimated fair values ol the Fum s reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period relaled to some portion of the associated goodwill

For additional information on goodwill, see Note I7 income taxes
JPMorgan Chase is subject to the income lax laws of the various jurisdictions in which il operates, including U.S lederal, state and local, and non-u S jurisdictions These laws are often complex and may be subject to different interpretations To determine the financial statement impact ol accounting for income taxes, including the provision for income lax expense and unrecognized tax nunc!its. IPMorgan chase musi make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the u S. and non-U.S tax jurisdictions

Jf'Morgan Chase's interpretations of fax laws around the world are subject to review and examination by the various taxing authorities m the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position These disputes over interpretations with (tie various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the nrm operates Jf Morgan chase regularly reviews whether il may be assessed additional income taxes as a result of the resolution of these matters, and the Firm rerords additional reserves as appropriate, in addition, the Firm may revise its estimate of income taxes due to changes in income tax 'iws. legaf interpretations, and business strategies (t is Possible that revisions in the Firm's estimate of income taxes mav materially affect the Firm's results of operations m any reporting period

The Firm's provision tor income taxes is composed of current and deferred taxes Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes Deferred tax assets are recognized if. in management's judgment, their readability is determined to be more likely than not. The Firm has also recognised deferred tax assets m connection with certain NOLs and tax credits. The Firm

per ior ms regular reviews to astenain whetnei ns defer red la* assets are realisable. These reviews include management s estimates and assumptions regarding future taxable income, which also mcorpoiates various ia» planning strategies, including strategies that mav he amiable to «nl:/p NOLs before they expire in tonnpi non wuh these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established The valuation allowance may be leverseil in a siibsºaueni reporting period if me I irm deter mines that based on revised estimates of future taxable income oi i nanges m lax planning strategies, it is more hkeiy than not mat all or pa't q! the deterred lax asse: will become realizable As of December 31, 2016. managemen: has deter mined it is more likely than not th;ii the Firm will realise its deferred tax assets, net of the «>isnng vacation allow,!nee IPMorgan Chase does noi record U S federal income taxes on the undistributed earnings of certain non-U S subsidiaries, lo the extern management has determined such earnings have been reinvested abroad (or an indefinite period of time. Changes to ihe income tax rates applicable to these non-U S subsidiaries may have a material impact on ihe effective lax rate m a luture period it such changes were to occur

Ihe Firm adjusts US unrecognized tax benefits as necessary when additional information becomes available uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount ol benefit to recognize An uncertain tax position is measured at the largest amount of benefit thai management believes is more likely than not to be realized upon settlement (t is possible that the reassessment ol JPMoigan Chase s unrecognized tax benefits may have a material unpad on us effective income tax rale in the period m which the reassessment occurs

For additional mlormation nn income taxes, see Note 26 Litigation reserves
For a description ol the significant estimates and judgments associated with establishing litigation reserves, see Note 31.

IPMorgan Chase ft Co./!

ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board ("FASB") Standards adopted during 7016

Summary ol pittance

- nmirwtesthedHerralistiieiiiivsiie i-ASB m February 2010 Gf viE-related accounnrvj i row if intra* for certain mvestmeni iwvjs.

including mutual funds, private equity tundsand hedjie lunds • Amends rite evaluation uf tees paid to a decision makei nr 4 sn vice provider, and exempts i eitain money market funds from convihtlatipri.

- Requires lha: all ektcss lai ueneMis and tai deficiencies ihaiAdopted nertam to employee siocx luted incentive payments be recognized. |IH.It WJ1, •sum income ;a> expense in the Consolidated statement ofConsoiid' menmr. rather dun within additional paid in capital

■ iiiivirtn an alternative for consolidated financing VIFs In eleil (11 to measure thr-n linanciai assets and Labilities separately under existing u £ GAAP (ur fair value measurement m;ri any diiiei meet in such Ian values reflected in earnings, or (Z) In measure imtti tneir (inancial assets and liabilities using the mure observable of the lair value ol the linanciai assets ur the fan value o' tne financial

Recognition and measurement ot financial assets and financial liabilities -

■ ft* financial IwWlitir, where ihe fair value option has been elecied. the porUonof it* total (haute tnUir value caused by changes in the Firm's own credit risk (i (_ Ova) is required[1] sena.'aielv in OCI

Management's discussion and analysis

FASB Standards Issued but not yet adopted (continued)

Revenue recognitor! - • Requires that revenue from contracts with customers be recognized

revenue from contracts with niHomm

upon transfer ol control ol 1 good or service in the amount ol consideration expecird to be received.

. chaffK ihe accounting lev certain convaci costs, including whether tliey may be oilset against revenue in the Consolidated

tssuetl Uir !0U statements of imome, and requires additional disclosures about

revenue and coniraci costs. - May be adopted using a tull letrosptctrve approach or a modified. cumulative effect approach wlierc-in the guidance is applied only tu existing contacts as of the date of initial application, and to new

measurement of fihancial assets and financial liabtliiief issued Unuiu 2016

contrails transacted aher ihardaic.

- *Requires that cer '.am equity instruments be measured al lair value with changes in ljjt value recognued m earnings.*
- Generally requires a cumulative effect adjustment to retained earnings as ol the beginning of the renew line period of adoption.

- Required effective date-lanuary l 201B[1]"

- Because the guidance dues not apply to revenue associated with linanciai instrunwnis including Inaris and secimlies that are accounted for under other ll S GAAP, the Firm doe-* noi expect the mi* revenue recognition piidaixr lo have a material impact or tne elenients of its Cciy*Klated statements uf income must closely associated with financial instruments, including securities gains, interest income and mteies: expense
- The Firm plans roadop: Ihr fvenup ret (ignition guidance in the first quarter of ?01B riv Firm's implementation elfot is include the identik ation of revenue within the scope ol the guittare c, as well as the evaluation of revenue contracts and related accounting policies. White the Firm has not yet identified any material changes in the limine of revenue recopiilnn. the Firm's review is ongcunfi, and It conimues to evaluate the ptesentaton ol certain contract costi (whethet presented gross or Oil set against runnier est revenue)

- Required effective dak-: lanuary i. zOlft.

- ThcFinnHcurirncfyMluatrrajtfwuulerCUfimrMCt on the Consolidated Financial Statements. Die nrm s implementation efforts include the identification ol securities within rhe scope of thr guidance, tl* evaluation trf the measurement alternative available lot equity securities without a readily dViorminable lair value, and the ■ elated impact [u amounting policies, presentation, and disclosures.

CLatsificatnn of certain cash receipts and cash payments in the statement uf cash
-i--2.'i/i;';.^;.
J SAattmavy of jp^Jrtaote^-^

- Replaces exJuing incurred lots Impairment guidance and establishes a tingle allowance Iramework for financial assets carried at amortized coil (including HTM securities), which will reflect managements estimate of credit losses over the fuH remaining expected life of the financial attecs.
- •eliminates eihtlng guidance hv PCI loans, and requires recognition of an allowance lor expected credit lottrs on linanciai assets purchased with more than insignificant credit deterioration since origination
- •Amends existing impairment guidance for Al S securities to incorporate an allowance, which will allow lot reversals of impairment tosses in the event that (he credit of an Issuer

- Provides targeted amendments to the ciassificatttn of certain cash Hows, including treatment of cash payments for settlement ol icro coupon debt instruments and distributions received from rtiuitv method investments.
- Requires retrospective application to all periods presented

'/i.'.Wv.'-V,

• Effects e*i rkianclal uatementi

- Required el fen he date- January 1. ZOZO "
- •Ihe Firm has begun its implementation efforts by estabtishine a Ikmwirtr. cross-discipline governance Structure The I inn is currently identifying key interpretive issues, and is assessing ensimg credit loss forecasting models and processes Against the new pittance lo determine m,hi(modifications may be required
- •Trie Firm ei peers fiat the new guidance will result in an inciease in its allowance tor credit losses due to several 1 triors, including

1 The allowance related to the Fir m't loans and commitments will increase tu cove: credit losses over the full remaining expected l.le ol the pnrtlutio. and will consider (xm-cted luluie changes in macioeconomic conditions
Z. Tl* nonaccretable diHrrmce on PCI loans will 1* recofmized as an allowance, offset by an iixrease in the carrying value of the related loans
3 An allowance will be established tor estimated credil losses on Hiy seciiritws

- •Ihe extent ol the increase is under evaluation, but will depend upon the nature and characteristic! ol (he Finn's purtfolio ai the adoption date, and the
iic conditions and forecasts al thai date

■ Required effective date; January I, Z01S ul
■ rtie Firm is current!* evaluating the potential impact on the Consolidated Financial Statements

- • Requires lessees to recognize all leases lunger than twelve months or. the Consolidated balance sheets as least liabilities with corresponding ngii-of-use assets.
- •Requites lessees and leswirv to classify most k'ascs using principles similar to eiisling lease accounting, but eliminates the "lined! line" classification leys.
- ■ Expands quahu:ive and quantitative disclosures regarding leasing arrangements.
- •Requires adoptoa using a modified cumulative effect approach wtierem the guidance is applied lo all periods pieseuied

- Reiiuiivd effective date- January 1.20I?M ■ The Firm li currently evaluating I lie potential impact on the ConsulKtaied Financial Statements by reviewing its easting lease comracts and service contracts thai may include embedded (eases Ihe Firm expects lo recognize Iras* liabilities and corrrsiMndingiigli'Ol use assets (at then present value) relaled lo predominantly al'. of the J10 Inllrun of luture minimum payments required under operating leaves as disclosed in Note 30 However, the population of contracts subject lo balance slw*i recognition and their initial measuiemrnt remains under evaluation. Hie Firm does not expert material Chances to the recognition ol operating lease eipense in its Consolidated statements of income

issued AwtKJtor 101 s

Issued Itnuirr 2017

bmdwill

issued iinuarv 201J

- •Requites inclusion of restricted cash in the cash and cash equivalents balances in the Consolidated statements of cash liuws.
- •Requires additional disclosures to supplement the Consolidated statements u(cash Hows.
- Requires letrutpective application to all periods presented

- Narrows the definition of a business and clarities that, lo be
c cm tide red a business, the lair value of the gross assets acquired (or disposed of I may not be substantially an concentrated in a single identifiable asset or a group of similar assets. - In addition, in order to be considered a business, a set ol artmtas and asters must include, ai a minimum, an input and a substantive piwrts thai together significant)p conlribule to the ability lo create

- Requires an impairment toss to be recognized when the estimated (air value of a reporting unit falls below its cairying value.
- ■ Eliminates (he second condition in Ihe current guidance that requires tn impairment lost to be recognized only il the estimated implied fair value of (he goodwill is below hs carrying value.

• Required effective date- January 1.2018'" ■ Ilie Firm is cuiienlly evaluating the potential rnipac: on ihe Consolidated Financial Statements.

- Required eflective dale- January 1. ?0\B '"
-.No mater ml impact is e (netted because the guidance is to be applied prospectively, although it rs antcipated cliat ahei adoption, tewer transactions wilt be treated as acquisitions or dispositions ol a business.

■ Required elleftrve date January 1, 7010 <"
- Based on rurrent impanmem lest results, the f urn does not eipect a materul effect on ihe Consolidated Financial Statements.
- • After adoption, the guidance mat result in more frequent goodwill impairment losses due io me removal ol the second condition

in a peimitted on January :

Management's report on internal control over financial reporting

FORrVARD-tOOKING STATEMENTS

rrom time 10 urne the Firm has made and will make forward looking statement these statements tan be identified bv the (act tliai they do not relate ^tticily 10 Historical oi current l.icts Forward-looking siaiements often use words such as "anticipate " "large;" "expect." "estimate " "intend " "plan," -goal." "believe." or otner words ol similar meaning Forward-looking statements provide IPMorgan Chase s current expectations or forecasts of future events circumstances, results or aspirations jfuorgan Chase's disclosures in this Annual Report contain forward-looking statements within tne meaning of the Pnvai? securities Litigation Reform Act of 199S ihe Firm also may make forward-looking statements in us other documents filed or furnished with the SCC in addition.. ihe Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of Ihe media and others

All lor ward-looking statements are. by their nature, subject to risks and uncertainties, many of winch are beyond the Firm's control JPMorgan Chase's actual luture results may differ materially Irom those set forth in its for warn-lookinj; statements While there is no assurance that any list of risks and uncertainties or nsk factors is complete, below are certain factors which could cause actual results to dilter from those in the forward-looking statements

- Local, regional and global business, economic and political conditions and geopolitical events.
- Changes m laws and regulatory requirements. Including capital and liquidity requirements alfeclmg the Firm's businesses, and the ability of the Firm to address those requirements.
- Heightened regulatory and governmental oversight and scrutiny of JPMorgan Chase's business practices, including dealings with retail customers,
- Changes in trade, monetary and fiscal policies and laws.
- Changes m income tax laws and regulations.

- Changes in income tax laws and regulations;
- Securities and capital markets behavior, including changes in market liquidity and volatility.
- Changes in investor sentiment or consumer spending or savings behavior.
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators,
- Changes in credit ratings assigned to the Firm or its subsidiaries.
- Damage to the Firm's reputation.
- Ability of ihe Tirm to deal effectively with an economic slowdown or other economic or market disruption,
- Technology changes instituted by the Firm, its counterparties or competitors:
- The success of the Firm's business simplification initiatives and the effectiveness of its control agenda.

- Ability of the Fum io develop new products and services and ihe extent to whirh products or services previously snld hy the firm (including but not limned to mortgages and asset-barked securities) require ihe Firm to incur liabilities oi absoru losses not contemplated at ihm initiation or origination,
- Acceptance nl ihe F irm's new and existing products and services hy the marketplace and the ability of the Fum to innovate and to increase maiket share.
- Ability of the Firm to attract and retain qualified employees.
- Ability of ihe Fum to control expense.
- Conijk!drive pressures.
- Changes m the credit quality of Ihe Fi'm's customers and counterparties.
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting.
- Adverse judicial or regulatory proceedings.
- Changes in apphcahle accounting policies, including ihe mtioduction ol new acrounimg standards
- Ability of the Firm to determine accurate values ol certain assets and liabilities,
- Occurrence of natural or man-made disasters or calamities or conflicts and the Firm's ability to deal effectively with disruptions caused bv the foregoing.
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities.
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts bv unauthorized parties to access information of the Firm or us customers or to disiupt the Firm's systems, and
- The other risks and uncertainties detailed in Part t. Item 1A Risk Factors in the rirm's Annual Report on Form 10-K for the year ended December 31. ?016

Any lor ward-looking statements made by or on behalf ol the Firm speak only as of Ihe date they are made, and JPMorgan Chase docs not undei take to update forward-looking statements to reflect the impact ot circumstances or events that arise after the dale the forward-looking statements were made The reader should, however, consult any further disclosures ol a forward-looking nature the Firm may make in any subsequent Annual Reports on Form]0-K. Quarterly Reports on Form 10-Q. or Current Reports on Form 8-K

Management o! JPMorgan Chase & Co ("JPUoipau Chase" oi the "Firm") is responsible for establishing and maintaining adequate internal control over (mannal reporting internal control over financial reporting is a process designed by, or under the supervision of the Firm s principal executive and principal financial officers, or persons peiforming similar functions, and effected by IPMorgan Chase s Hoard ol Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and ihe preparation ol financial statements lor external purposes in accordance with accounting principles generally accepted in the united States of America

JPUorgan Chase's internal control over linanciai reporting includes (hose policies and procedures that (J) pertain (o (he maintenance ol records, lhat. in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets. (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of linanciai statements in accordance with generally accepted accounting principles, and thai receipts and expenditures ol Ihe Firm are being made only in accordance with authorizations of JPUorgan Chase's management and directors, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Berause of us inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation ol effectiveness to future periods are subject to ihe risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31. 2016 In making the assessment, management used the "internal Control - Integrated Framework* ("COSO 2013') promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("C050")

Based upon the assessment peilomied manage-nen: concluded thai as ol December 31 201 (> ji-uoinan Chase 5 internal control over financial reporting was effective based ujwn the COSO 2013 liamework Acldihonaliy twsec upon management s assessment the Firm determined ilia; there were no material weaknesses m us internal control over financial reporting as of De< ember J I 2016

The effectiveness of the Firm's internal control over financial reporting as of December 31,2016 has been audited by PncewaterhouseCoopers 11 P. an ind-.*p-jinJeni registered public accounting firm, as stated m their report which appears herein

James Dimon
Chairman and Chief Executive Officer

Marianne Lake
Executive Vice President and Chief Financial Officer

February 28. 2017

JPMorgan Chase 1 CoJiOlC, Annual Report

Report of independent registered public accounting firm

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To the Board ot Directors and Stockholders ot JPUorgan Chase 1 Coj

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash Mows present fairly, in all material respects, the financial position of JPMorgan Chase A Co. and its subsidiaries (the "Firm") at Oecember 31. 2016 and 2015 and the results of their operations and their cash flows for each of the three years in the period ended December 31. 2016 in conformity with accounting principles generally accepted in the United States of America Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016 based on criteria established in internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of ihe effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting" Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (united States) Those standards require that we plan and perform ihe audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial staicment presentation Our audit of internal control over financial reporting included obtaining an understanding of internal

control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating ihe design and operating effectiveness of internal control based on the assessed risk Our audits also included performing such other procedures as we considered necessary m the circumstanres. we believe that our audits provide a reasonable basis for our opinions

A company's interna' control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles A company's internal control over financial reporting includes those policies and procedures that (i) pertain io the maintenance of records lhat, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company, (u) provide reasonable assurance that transactions are recorded as necessary lo permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only m accordance with authorizations of management and directors of the company; and (in) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements

Because of its inherent limitations, internal control over financial reporting may not prevent or deled misstatements Also, projections of any evaluation ol effectiveness to future periods aie subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate

February 28. 2017
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Investment bankini tees Principal transactions Lending- and deposit-related lees Asset manajwnent. administration ar Securities (aim
SS.TC1 »,B1»
Mortgage lees and related income Card income Other income
Nonntcrett re
Interest income interest expense

Provision lot credit losses
J.63I 6.S4*
4,655 2J97 5.756

Non intern! expense Compensation expense Occupancy expense
Technology, commurmauont and equipment expense
Professional and outside services
Marketing
J4.SJ6 v.*03
Other expense
Total noninterest expense

hKome tax expense
net Income applicable to common ttockhokktrs
1,611.5 1.649J
Met Income per common share data Bask: earnings per share Diluted earnings pet share wrighted-average basic shares weighted-average diluted shuts Cash dividends declared per common,

The Notes lo Consolidated Financial Statements arc an integral part of these statements

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3.S63 6 070 3013 51,478
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30.160 1.MW 5.304

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PncewaterhouseCoopers LLP • 300 Madison Avenue * New York, NV 10017

JPUorgan Cluie t CoA'016 Annual Repori
Consolidated statements ot comprehensive income

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Total ether comprehensive income/(loss), afiet-tai

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ii-deia- tui«tv\r)ld jiid srcurr.ics purchased under i Stur.ties twrowed (included 10 and 1 Jos a: lair vahri Trading assets (inchmed asseis pledged of 1115.847 and 1115.7H4I
S«ii:i:*Min<]udi'd 1218.891 and 12*1 7b* a: lan value and assrit pledged of 116,1 IS and 11* 8S3I loans (included 12,130 and 12 861 ai lan value) allowance tor loan losses
loans, net of allowance (ot loan kisses
accrued interest and accounts recmrable

Goodwill
mui tgage sconcing ngh:s Other intangible assets
Olher assets (included 17.SS7 and 17 604 at fair value and aivts pledged oi 11.603 and 11.2861

110 Vol 96 *0« J77 130 789 Oio g04.76S (13 776)
MO 939 52 liO 14 131 47 7*8 6 096 867

«11!.*12 and 117 516 at fair value)

Commercial paper
Other borrowed tints (included f 9,105 and 19 911 at fair value) trading llabiliiies
Accounts payable and other liabilities (included 19.120 and 14.401 al lair value)
Rent'ltfial imeiests issued by consolidated VIEs (included 1120 and 1787 at fair value)
Long term debt (included 137.686 and 131.065 at fair value)
152 67(j 15 St. 2
) 2.490.972 1 2 151 6"B

1 1.375.179 1
17b897 1 ?7 (,38

165.666 11.7JB 77.70S
116 619
190.543 19.047
295.245
Total liabilities'"

Coiiiimi-neniiand contingencies (see Notes 29, 30 and 31) Stockholders' equttT
(■referred stock (li par value, aulhorlnf >00 OOO 000 snares issued 7.606,750 shares) Common stock (11 par value- authorized 9.000.000,000 sharrv issued 4,104,931.895 shares) Additional paid in capital Retained earnings Accumulated other comprehensive income
Snares held in resumed slock units rfiSU") trust, at cost (472.953 shares)
Treasury stoct, at cost (543,744.003 and 441.4S9.392 shares)
Total stockholders' equity

91.627 162.440

Toiii liabilities and stocfcholderv equity

December 31.1m minions)

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The Notes to Consolidated Financial Statements are an integral part ol these statements.

JPtiof gan Chase * CoV2011 Annual Report

Consolidated statements of changes in stockholders' equity

n. eicept per share data) .*

Balance at Dnuaiy 1 Issuance of preferred stock
Balance at December 3]
Common slock
Balance al lanuary 1 and December 31
Additional paid<in capital

ie common stock lor employee stock-based compensation awards, and

Balance at
Retained earnings Balanri a; urinary i
Cumulative effect ofthange in accounting principle Net income Dmdends declared. PiHerr«r stock
Common stock (11M. 11 71 and 11 58 per share lor 7016.201S ar I 2014, respectively)

(334)
(539)

146,420 (154) 24.733

(1.647} (6,912)

70 063 6.005

129.977 24.442

(1,515) (6,48")

93.S28 (508)

115.415 71.7*5

(1.125) (6.07B)

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Accrued Interest iivj ■cr.o-.eiljiec choir Other uteii

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Balance al December 31

Accumulated other comprehensive income

Cumulative effect ol (lunge in accounting principle Othet (otitwehcnsive income/! less)

Sham held in KSU Trust tt cost Balance al lanuaiy 1 and December 31

Treasury stock, at cost , Balance at January 1 Purchase o(treasury stock Reissuance irom treasury stock Balance at December 31 Total stockholders* equity

(21.691) (9.082)

(17.856) (5.6 (C>>

2,189 (1.997)

114.847) (4.760) 1.751

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The Notes to Consolidated Financial Siaiemenls aie an integral part ol these statements.

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The Notes (o Consolidated Financial Statements aie a« integral part ot these statements

IPVJorgjii Chase * COJ2016 Annual Report

Notes to consolidated financial statements

Not*; I - Basis of presentation

IPMorgan Chase A Co rmunrtian Chase" or ihe "rum'). a financial hunting company incorporated under Oetaware law m 1 QfiE is a leading global financial services firm and one of the taigest banking institutions in the ll S . with operations worldwide The I irm is a leader m investment bankmg financial services for consumers and small Dusmess tonnnercial hanking financial transaction processing and asset management For a discussion ol Ihe Firm's ousmess segments see Note 33

ihe accounting and financial reporting policies of JPUorgan Chase and its subsidiaries conloim to U S GAAP Additionally, where applicable, the polices conform to the accountinc and reporting guidelines prescribed by refjulatory authorities

Certain amounts reported in prior periods have been reclassified to conform with the current presentation

Consolidation

The Consolidated Financial Statements include the accounts ol IPMorgan Chase and other entities in which the Firm has a controlling financial interest All material intercompany balances and transactions have been clímmaied

Assets held for clients in an agency or fiduciary capacity bv the Firm are not assets of JPMorgan Chase and are noi included on the Consolidated balance sheets

The Firm determines whether n has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity

Effective January I. 2016. (he Firm adopted new accounting guidance related to (he consolidation of legal entities such as limited partnerships, limited liability corporations, arid securitization structures The guidance eliminated the deferral issued by the FASB m February 20lo ol the accounting guidance tor VJF.s lor certain investment lunds. including mutual funds, private equity funds and hedge funds in addition, the guidance amends the evaluation of fees paid to a decision-maker or a service provider, and exempts certain moncv market funds from consolidation Furthermore, asset management funds st rur lured as limited partnerships or certain limited liability companies are now evaluated for consolidation as voting interest entities if the non-managing partners or members have the ability to remove the Firm as the general partner or managing member without cause 0 e . kick-out rights) based on a simple majority vote, ol the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these voting interest entities However, in the limited cases where the non-managing partners or members do not have substantive kick-out or participating right;, the Firm evaluates the funds as VIEs and consolidates il it is the general partner or managing member and has a potentially significant variable interest There was no material impact on the Firm's Consolidated

Financial Statements upon adapt 'tin of ".his accounting fjui dance

Voting fnreresr Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights lhat enable Iherr. to make significant decisions relating io the entity s operations For these types o' entities, the Firm's dKermmation ot whether n has a rmili oiling interest *s primarily based on the amount ol voting equity interests held Entities m which the E irm has a continuing (manna! interest, through ownership ol the maioiny of the entities voting equity interests, or imough other contractual rights thai give ihe Fum control are consolidated bv the Firm

investments in companies in which the Firm has significant inlluence over operaiing and financing decisions (but does not own a majority ol the voting ecuity interests) are accounted for (i) in accordance with the equity method ol amounting (which reouires the Firm to recognize its proportionate share ol Ihe entity's net earnings), or (nl at fair value it the lau value option was elected These investments are generally included in other assets, with income or loss included in other income

Certain Firm-sponsored asset management funds are structured as limited partnerships nr limned liability (ompanies For many of these entities the Firm is the general partner or managing memner nut the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i e . kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights lo participate in important decisions Accordingly, (he Firm docs not consolidate these lunds in the limned cases where the nonaffiliated partners or members do not have substantive kick-oui or participating rights. Ihe Firm consolidates the funds

The rirm's investment companies have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are earned on the Consolidated balance sheets at lair value, and are recorded in other assets

variable Interest Entities

vies arc entities that, by design, either (l) lack sufficient eauity to permit the entity ta finance its activities without additional subordinated financial support from other parties, or (?) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns ol the entity.

Ine most common tytte ol VIE is an si't S ᶠTs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors Ihe basic SPF structure involves a company selling assets to the SPE. the SPE lunns the pui chase of those assets hy issuing securities io investors The legal documents thai govern the transaction speedy how the cash earned on ihe assets must be allocated to Ihe SP£ s investors and other parlies that have rights lo those cash flows SPF.s are generally structured to insulate investors Irom claims on (he SPE's assets by ci editors of olhei entities, including the creditors of the seller ol the assets

The primary beneficiary of a vie (i e.. the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE The primary beneficiary is the pariy that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic perlormance. and (2) through its interests m the vtt, the obligation to absorb losses or the right to receive benefits from the VIF (hat could potentially be significant to the VIE.

lo assess whether the Firm has rhe power to direct (he activities of a VIE that most significantly impact the viE's economic perlormance, the Firm considers all the facts and circumstances, including its role in establishing (he VIE and us ongoing rights and responsibilities This assessment includes. First, identifying (he activities that most significantly impact the VIE's economic performance, and second, identifying which parry, if any, has power over those activities in general, the parties that make the most significant decisions affertmg the VIE (such as asset managers, collateral managers, servicers, or owners ol call options or liquidation rights over ihe Vit's assets) or have the right io unilaterally remove those decision-makers arc deemed to have the power to direct the activities of a vie

to assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits Irom the VIE thai could potentially be Significant to the VIE. the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the vie This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the vie. Factors considered in assessing significance include the design ol the VIE, including its capitalization structure, subordination of interests, payment priority, relative share of interests held across various classes within the ViE's capital structure, and the reasons why the interests are held by the Firm

Ihe Firm perlorms on-going reassessments of: (l) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework: and (2) whether changes tn the facts and circumstances regarding the Firm's involvement with a vie cause the Firm's consolidation conclusion to change

Use of rstimatos in the preparation of consolidated financial statements

Lie preparation ul the Consolidated hnac.ial SMic-nems inquires management io make estimates and assumptions that affeel Ihe reported amounts o' assets anrj liatnlnes revenue and expense and disclosures of contingent assets and liabilities Actual results could be different Irom these esumaips

Foreign currency translation JPMorgan Chase revalues assets liabilities revenue vid expense denominated m non-Ll S cu'ienaes into U S dollars usmg applicable exchange rates

Gams and losses relating to translating functional currency linanciai statement lor u S reporting are mclunrtl in Of i within stockholders' equity Gains and losses iclating to nonfunctional currency transactions, including non-u s operations where Ihe luiirtinnal currency is the Li S dollar, are reported m the Consolidated statements of income

Offsetting assets and liabilities

U S GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net hasis on Ihe Consolidated halance sheets when a legally enforceable master netting agreement exists US GAAP also permits securities sold and purchased under icpurchase agreements to oe presented net when spenfn'd conditions are met. including the existence ol a legally enforceable master netting agiccmeni The Firm has elected to net such balances when the specified conditions aie met

The Firm uses master netting agreements lo mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, andsecunfies botrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by dial condact to he terminated and settled through a single payment in a single currency m (he event of a default (e g , bankruptcy, failure to make a required payment or securities transfer or deliver collated or margin when due after expiration of any grate period) Upon the exercise ol termination rights by the non-defaulting party (i) all transactions are terminated, (n) all transactions are valued and the positive value or "m the money' transactions are netted against the negative value or "out of the money" transactions and (m) the only remaining payment obligation is of one of the parties to pay the netted termination amount, upon exercisp of repurchase agreement and securities loan delault rights m general (i) all transactions are terminated and accelerated. (ii) all values of securities or cash held or to he delivered arc calculated, and all such sums are netted against each other and (m) the only remaining payment obligation is of one of the parties to pay the netted termination amount

Typtcaj master netting agreements tor these types ol transactions also often contain a collateral/margin agreement that provides for a security interest in. or title transfer ol, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount ot the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold l he collateral/margin agreement grants to the demanding party, upon delault by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin It also grants to tlie demanding parly the right to liquidate collateral/margin and to apply ihe proceeds to an amount payable by the counterparty For further discussion of the Firm's derivative instruments, see Note 6 For further discussion ol the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13.

Statements of cash flows

For JPUorgan Chase's Consolidated statements of cash flows, cash is defined as (hose amounts included in cash and due from banks.

Note 3 Page 14?
Note 4 Page 168
Hole 6 Page 174
Hole 7 Page 187
Notts Page 169

Note <t Paec l 89
Note io Patjc 197
Note 12 Page lv<>
Note 13 Page 205
Note 14 Page 208
Note is Page2:7
Note 16 Page 232
Note 17 Par.' 2AO*
Nute 18 Pace ?'i
Noie?l Page 245
Hole 26 Page 250

Significant accounting policies The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found

Fair value measurement
Fair value option
Derivative instruments
Mommeresr revenue
interest income and interest eipense
Pension and other postretirement cmuioyve benefit plans
employee stock-hased incentives
Securities
Securities financing activities Loans
Allowance for credit losses
variable interest endues
Goodwill and Mortgage servicing riglitv
Premises and cqmoment
Long-term debt
Note 29 Page 255 Note 31 Page 262
income taxes
Olf-talance sheet lending-rdalcd financial instruments. Guarantees and oth*! commitments
Note 2 -
None

Note 3 - Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value These assets and liabilities are predominantly carried at fair value on a recurring basis (i e., assets and liabilities that are measured and reported at fair value on the rirm's Consolidated balance sheets). Certain assets (e g, certain mortgage, home equity and other loans where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that ts. they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment)

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices or inputs, where available, if prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gam or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and mav vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in a different estimate of fair value at the reporting date

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's VCG. which is part of the Firm's Finance function and independent ol the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value The VGF is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm The VGF is chaired by the Firmwide head uf Ihe VCG (under the direction of the Firm's Controller), and includes sub-forums covering Die CiB. CCB. CI). AWU and certain corporate functions including Treasury and CIO

Price verification process
The VCG verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where availahle Where independent prices or inputs are not available, the VCG performs additional review to ensure the reasonableness of the estimates The additional review may include evaluating the limited market activity including client unwinds, benchmarking valuation inputs to those used for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation There are also additional levels of management review for more significant or complex positions

The VCG determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions No adjustments are applied for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy) For other positions, judgment is required to assess Che need for valuation adjustments lo appropriately reflect liquidity considerations, unobservable parameters, and. for certain portfolios that meet specified criteria, the size of the net open risk position The determination of such adjustments follows a consistent framework across the Firm

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity Liquidity valuation adjustments are applied and determined based on current market conditions Factors that mav be considered in determining the liquidity adjustment include analysis of (1) the estimated bid-offer spread for the instrument being traded. (2) alternative pricing points for similar instruments in active markets, and (3) the range of reasonable values that (he price or parameter could take.

■ The Finn manages certain portfolios o(financial
instruments on the basts of net open risk exposure arid, as permitted by u S. GAAP, has elected io estimate the Fair value of such portfolios on (he basis of a transfer of the entire net open risk position in an orderly transaction Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a largcr-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including ihe size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal markel-size

- Unobservable parameter valuation adjustments may be made when positions ate valued using prices or input parameters to valuation models thai are unobservable due to a lack of market activity or because they cannot

Notes to consolidated financial statements

tui implied iicirii observable market data Sncfi prices en parameters musi t>» estimated and arc meteluie. sublet (to inanarjemcm jucIE'iiem UnotiseivaMe parameter valuation aciiustmentb arp applied to relied Ihe uncertainly inherent m the resulting valuation estimate

- Where appropriate the Firm also applies adjustments to its estimates ol lair value m oidei to appropriately refleci countei party credit quality (CVA). the Firm's own creditworthiness (DVAl and the imparl of funding IFva). using a ronsislenl tiamijwoik across the Firm For more information on such adjustments see Ciedit and funding adjustments on page lc* of ihts Note

Valuaticm modd review and ,ioproval il prices or quotes arc not available for an instrument ot a Similar instrument, fan value is generally determined using valuation models thai consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters Where this is ihe case ihe price verification process described above is applied to the inputs to those models

The Modef Risk function reviews and approves a wide range of models, including risk management, valuation, and regulatory capital models wed bv Ihe I irm The Model Risk function is independent ol model useis and developers ihe Firmwide Model Risk Executive reports to the Firm's CRO When reviewing a model, Ihe Model Risk function analyzes and challenges (he model methodology, and the reasonableness ol model assumptions and may perform or require additional testing, including back-testing ol model outcomes.

The Model Risk Function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment in certain circumstances, the head ot the Model Risk lunction may grant exceptions to the Firm's model risk policy lo allow a model to be used prior to review or approval. The Mode! Risk Function may also require Ihe user to take appropriate actions to mitigate the model risk it it is to be used in the interim
valuation hierarchy
4 :nree level valuation hierarchy has been estanlisned unci-* u S Gaa? [5] loi disclosure ol lair value measurements The valuation hierarchy is tused on the transparency ol inputs to the valuation o' an asset or liability as of the measurement date the tluee levels are dehned as follows

- Level 1 - inputs to ine valuation metnodolugv are quoted prices (unadjusted) ior identical assets or liabilities in active markets
- Level 2 - inputs to the valuation methodology mt lode minted pr.res lor similar assets and l.ahiimes in active [1] markets, and inputs lha: aie observable loi the asset oi liability eitner directly oi indirectly, lor substantially the
r full term o(the Imancia: instrument
- Level 3 ■ one oi more inputs to the valuation methodology are unobservable and significant to the fair value measurement

A financial instrument *> categorization within Ihe valuation hierarchy is based on the lowest level of input that is significant to ihe fair value measurement

The following tahle describes the valuation methodologies generally used hv fie Firm io mcasur instruments at (air value, including (he general classification of such instruments pursuant tu th<

Valuation methodology

Secunnes lirancmg agr comer

Valuations are based on discounted cash flows. which consider • CieiiMtive features lor further inlorm.Hion lelfr to ihe cliw of derivatives below
- Marker rales for |J>e respective miiuilv
- Collateral

Loans and lending-related commitments - wholesale
Loans earned at lair value (e g where obscrvame market data is available valuations are based cm trading loans and non-trading . obsctved market prices (circumstances arc infrequent) loans)
- Relevant broker quotes
- Ooserved market prices tor similar instruments

Loans held (or investment and associated lending-related commitments
where observable market dai* is unavailable or limned, valuation-, are based on discounted cash flows, which consider the following.

■ Prepayment sum
Valuations are based on discounted cash Hows, which consider ■ Credit spreads, derived Irom the cost ol CDS. or oenenmark credit mives developed by ih<! Firm, by industry and credit rating
- Prepayment speed Lending-related commitments are valued similai lo loans and reflect Ihe portion of an unused commitment expected, based on the Fum s average portfolio historical experience, lo become lunded prior to an obligor default

Valuations are based on discounted cash hows which consider
- Credit losses - which consider expected and current delault rates and loss seventy
- Pre payment speed • Discount rales
- *Servicing COM*

Valuations are based on discounted cash Flows, which consider • Credit costs - the allowance (or loan losses is considered a reasonable proxy for the credit cost
■ Projected interest income, late-fee revenue and loan repayment rates

Trading loam - conforming residential mortgage loans expected to be sold
- Discount rates
■ Servicing ruses

Fair value is based on observable prices tor mortgage-backed securities with similar collateral and incorporates adjustments io these prices to account lor differences between the securities and trie value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity

Notes to consolidated financial statements

Mortgage servicing rights

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See Mortgage servicing rights in Note 17.

in Ihe absence of quoted market prices, secunlies are valued based on. Level 2 or 3
- Observable market prices for similar securities
- Relevant broker quotes
- Discounted cash (lows

In addition, the Following inputs io discounted cash Flows are usee! tor the following products.
Mortgage- >nd asser-backed securities specific inputs.
- Collateral characteristics
- Deal-specific payment and loss allocations
- Current market assumptions related lo yield, pee payment speed, conditional default rates and luss seventy

Collateralized loan obligations l'CLOs'l specific inputs
- Collateral characteristics
- Deal-specific payment and loss allocitions
- Expected prepayment speed, conditional default rates, loss seventy
- Credit spreads
- Credit rating dan

valued using observable markei nnccs or data

Predominantly level 1 and 2 (cvel 1

Level 2 or 3
Derivatives that arc valued using models such as the Blacx-Scholes option pricing model, simulation models, or a combination of models, (hat use observable or unobservahle valuation inputs (e g.. plain vanilla options and interest rate and CDS). Inputs include ■ Contractual terms including the period to maturity

- Readily observable parameters including interest rales and volatility
- Credit quality of (lie counterparty and of the Tirm
- Markei funding levels - Correlation levels

tn addition, specific inputs used for derivatives thai are valued based on models with significant unobservable inputs are as follows

Structured credit derivatives specific inputs include

- CDS spreads and recovery rates
- Credit correlation between the underlying debt Instruments (levels are modelrd on a transaction basis and calibrated fo liquid benchmark tranche indices)

Private equity direct investments Private equity direct investments

- Transaction prices
- Trading multiples of comparable public companies
- Operating perlormance of the underlying portfolio company
- Adjustments as required, since comparable public companies are not identical to (he company being valued, and For company-specific issues and lack ot liquidity
- Additional available inputs relevant to the investment

Net asset value

- NAv is supported by the ability io redeem and purchase at tne nav i level
- Adjustments to the NAV as required, lor restrictions on redemption (e g„ lock-up penods or withdrawal limitations) or where [1] observable activity is limited

Valued using observable market information, where available.

Predominantly level 2

Valuations are based on discounted cash flows, which considc.

- Market rates for respective maturity
- Valuations are based on discounted cash flew analyses that t consider the embedded derivative and the terms and payment structure of the note

) Excludes utun trwtjurwrti III

- The embedded derivative Features arc considered using models such as (he Black-Schofes option pricing model, simulation models, or a combination of models thai use observable or unobservable valuation inputs, depending on the embedded derivative The specific inputs used vary according to the nature of the embedded derivative features, as described m the discussion above regarding derivatives valuation Adjustments aie then made lo this base valuation to reflect the Firm's own creditworthiness (DVA) and to incorporate the impact of funding (FVA) See pages 164-165 01 (his Note.

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Certain long-dated equity option specific inputs include.
' Long-dated equily volatilities Certain interest rare and FX exotic options specific inputs include

- Inteiest raie correlation
- Interest rate spread volatility ■

Foreign exchange correlation

- Co-relation between interest rates and foreign exchange rates
- *Parameters describing the evnlulinn or underlying interest rates*

Certain commodity derivatives specific inputs include-

- Commodity volatility
- Forward commodity price

Additionally, adjustments are made to reflect counterparty credit quality (CVA). the Firm's own creditworthiness (DVa>. and tne impact ol funding (fvai Seepages 164-165 01 (hisNote.

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Notes to consolidated financial statements

Ttie following table presents tin- assets •mrj namiincs reported at la» value as ol OeceniTier 31 2016 and .'Oi S bv m.yn pmrturi caiegoiv and inn value hierarchy

Assets and liabilities measured at (air value on a recurring h.tsis

Notes to consolidated financial statements

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Transrert between levels for instruments carried at fair value on a recurring basis For the years ended Oecember 31. 2016 and 2015, there were no significant transfers between levels 1 and 2.

During the year ended December 31. 2016, transfers from level 3 to level 2 included (he following

- Si A billion of long-term debt driven by an increase in observability and a reduction of the significance in the unobservable inputs for certain structured notes

Ourmg the year ended Oecember 31. 2016, transfers from level i to level 3 included the following

- SI I billion ot gross equity derivative receivables and (1.0 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance in unobservable inputs
- HO billion of trading loans driven by a decrease in observability

During the year ended December 31. 2015, transfers fiom level 3 to level 2 included the following

- (3 1 billion of long-term debt and (1 0 billion ol deposits driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction of the significance in the unobservable inputs for certain structured notes with embedded

- (3.1 billion of long-term debt and (1.0 billion of deposits driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction of the significance in the unobservable inputs for certain structured notes with embedded equity derivatives.
- (2.1 billion of gross equity derivatives for both receivables and payables as a result of an increase in observability and a decrease in the significance in unobservable inputs, partially offset by transfers into level 3 resulting in net transfers ol approximately ll 2 billion for both receivables and payables.
- (2 8 billion of trading loans driven by an increase in observability of certain collateralized financing transactions

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During the year ended December 31, 201S, transfers from level 2 lo level 3 included the loi lowing

- S2 4 billion of corporate debt driven by a decrease in the significance in the unobservable inputs and an increase m observability for certain structured products

During the year ended December 31, 20] A. transfers dom level 3 to level 2 included the following:

- (4.3 billion and (4 A billion of gross equity derivative receivables and payables, respeciively. due to increased observability of certain equity option valuation inputs
- (2 7 billion of trading loans, (2 6 billion of margin loans. (2.3 billion of private equity investments. (2 0 billion ot corporate debt, and (l 3 billion ol long-term debt, based on increased liquidity and price transparency
- Transfers from level 2 mlo level 3 included il J billion of other borrowed funds. (1 1 billion ol trading loans and (1 0 billion of long-term debt, based on a decrease in observability of valuation inputs and price transparency

All transfers are assumed to occur at the beginning of the quarterly reporting period m which they occur

Level 3 valuations

The Firm has established well-structured processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3) For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 150-153 of this Note.

Estimating fair value requires the application of judgment l he type and level of judgment required is largely dependent on the amount of observable marVet information available to the Firm, ror instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more SrgmficanE than those required when estimating the fair value of instruments classified within levels 1 and 2

in arriving at an estimate ot fair value for an instrument within level 3. management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in denying valuation inputs including, but not limited io. transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for (hose inputs and, for certain instruments, the weighted averages ol such inputs. While the determination io classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is. components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/ * or level 2 inputs are noi included m the table, in addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy

The range of values presented in the table is representative of the highest and lowest level input used to value (he significant groups of instruments within a product/ instrument classification Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments (hat the input is being used to value

In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of ihe reasonableness ol the rirm's estimates and assumptions Rather, they reflect the characteristics ol the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics For example, two option contracts may have similar levels of market risk exposure and valuation uncertain,',■. but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices The input range and weighted average values will therelore vary from period-l o-penod and parametcr-to-parameier based on the characteristics of the instruments held by the Firm at each balance sheet date

For the Firm's derivatives and structured notes positions classified within level 3 ai December 31. ?0i 6, interest rate correlation inputs used in estimating lair value were concentrated towards the upper end of the range presented, equity correlation inputs were concentrated at the upper end of the range, the credit correlation inputs were distributed across the range presented, and the foreign exchange correlation inputs were concentrated at the upper end or the range presented in addition, the interest rate volatility inputs used in estimating lair value were distributed across the range presented, equity volatilities were concentrated in the lower half end ol the range, and forward comnwdity prices used in estimating (fie fair value ol commodity derivatives were concentrated in the middle of the range presented

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Notes to consolidated financial statements

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476 Discounted cash floe

(dl Tne calf gories presented in tt* table taw been Jfjjrela:ed based upon tile product type, wructi mav differ from their classifies:** on the Col balance sheets. Fulthermore the inputs pl esenteil fur each vallutum r^chniaue in ;he table are, in same cases, not ap:ll«..ible to every ins;ryr usine, the technique as Hie c ha; icier istirs ol ihr instruments can diflcr

lb) The unobservable inputs ana associated input ranges lo: allnnxinvvply 1394 million uf credit deriva:rve reteivtilric-i divj H26 million cit-cil payaUnwitti unde'ivinf ;nmmmal mtxlRaEe n-> finve been inclurtoo in the inputs a.ld ranges provided lo- culinnc.-cial mort^ci- UlKkcd v.

tcl the unobservable input] and auooated inpu: ranges lor appronmaleir Mbl nl payables wi:h under lying AOS risk have been included in the menus arid langes p municipalities * J,d other

(d) lon| term debt. Other borrowed funds and deposits include siructured notes issued by Ma? Fum that are predominantly linancial in embedded derivatives, the estimation ol the ttv value of structured no:« includes lhe derimmt lv it ures embedded wrhin tlir instrument l tie si| mficant unobservable inputs are broadly cony si (Tit witri '.hose presented for derivative receivables.

Changes in and ranges ol unobservable inputs in? following discussion provides a description ol the imparl on a fair value measurement ol a change in each unobservaDle input in isolation, and lhe interrelationship between tmohsprvable inputs, where relevant and significant The impact of changes in inputs may not be independent, as a change m one unobservant input may give rise to a change m another tinobscrvable input. Whore relationships do exist between two unobservable inputs, thuse relationships are discussed below Relationships may also exist oeiwecn observable and unobservable inputs (for example, as ooservable interest rates rise, unobservable prepayment rates decline), such relationships have not been included u< the discussion below in addition, loi each of the individual relationships described below, the inverse relationship would also generally apply

the following discussion also provides a description of attributes of the underlying instruments and external market factors thai allect the range ol inputs used in lhe valuation of the Firm's positions

Yield - The yield of an assel is the interest rate used to discount future cash Hows tn a discounted cash flow calculation An increase in the yield, in isolation, would result in a decrease in a lair value measurement

Credit spread - The credit spread is the amount of additional annualized return over lhe market imprest rale that a market participant would demand for taking exposure to the credit risk of an instrument, the credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation Generally, an increase in (he credit spread would result in a decrease in a fair value measurement

1 he yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument The yield is also impacted by the absolute level ol the coupon paid hy (he instrument (which may not correspond directly to the level of inherent risk) Therefore, the range of yield and credit spreads reflects the range of nsk inherent in various instruments owned by (he Finn The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and (he characteristics of the underlying mortgagps within the collateralized pool, including borrower FICO scores. LTV ratios lor residential mortgages and the nature of the property and/or any tenants tor commercial mortgages For corporate debt securities, obligations of u.S stales and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

fieii.ivmcnt sp^cil - The rvenaymem spc.-d 'S a ni'.-asu:? m tnp voluiuaiv imscrii-duitf:! principal repayments o' a pienavahle obligation in a collateralized pool Prepayment speeds generally decline as Uonower delinquencies t;se An increase in prepavmem speeds, in isolation would resuli m a decrease in a lair value measurement ot assets valued at a premium to pai and an increase in a lair value measuremeni of assets valued at a discount io Mr

Prepayment speeds may vary from collateral poo:\o rollateral pool, and are driven hy the type and location ot the underlying borrower, and tne remaining teno: of me obligation as well as (he level and tyne (e g . fued or floating) of interest raie bt'ini; paid Dy trie borrower Typically collateral pools wuh higher oavowsr ucdu cusinv have a higher piepavmer.t rate than those wuh lower borrower credit duality, all other factors being emia'.

Conditional default raie - The '.ondidonai default rate is a measure of (he reduction in the outstanding collateral balance underlying a collateralized obligation as a result of delavlls While thine is typically no diren relationship between conditional default rates and prepayment speeds collateralized obligations lor which the underlying collateral has high prepayment speeds will (end io have lower conditional default rates An increase m conditional default rates would generally be accompanied bv an increase in loss severity and an increase in ciedit spreads An increase in the conditional de'ault rate in isolation, would n.-suit m a decrease in a lair value measurement Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself Based on the types of securities owned in Hie nrm s market making portfolios, conditional default rates are most typically at the lower end ol the range presented

Loss severity ■ The loss severity [(he inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation ol a particular loan, expressed as the net amount ol loss relative io the outstanding loan balance An increase in less seventy is generally accompanied bv an increase m conditional default rates An increase in the loss seventy, in isolation, would result in a decrease in a fair value measurement

The loss seventy applied in valuing a mortgage-backed security investment depends on factors relating to me underlying mortgages, including the LTV ratio, the nature of the lender's lien on the property and other instrument' specific factors

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Correlation - Correlation is a measure of the relationship between the movements of two variables (e.g. how the change in one variable influences the change in the other) Correlation is a pricing input for a derivative product where thft payoff is driven by one or more underlying risks Correlation inputs are related to the type of derivative (e g.. interest rate, credit, equity and foreign exchange) due to tht> nature of the underlying risks when parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter An increase in correlation can result in an increase or a decrease in a fair value measurement Given a short correlation position, an increase in correlaiion, in isolation, would generally result in a decrease in a fair value measurement. The range ol correlation inputs between risks within the same asset class are generally narrower thon those between underlying nsks across asset classes in addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of fatrtors including the nature of those risks For example, (he correlation between two credit nsk exposures would be different than Ihat between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input, as the relationship between the underlying risks may be different over different lime periods Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions

volatility - Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time Volatility is a pricing input for options, including equity options, commodity options, and interest rate options Generally, the higher the volatility of the underlying, the riskier the instrument Given a long position tn an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number ol factors, including the nature of ihe risk underlying the option (e.g. the volatility ol a particular equity security may be significantly different Irom Ihat of a particular commodity index), the tenor of (he derivative as well as the strike price of the option
EBITDA multiple - EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value An increase in the EBITDA multiple, in isolation, net or adjustments, would result in an increase in a fair value measurement

Changes in level 3 recurring fair value measurements The following tables include a rollforward of the Consolidated halancc sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2016. 2015 and 2014 When a determination is made lo classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameter, (u Che overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is. components (hat are actively quoted and can be validated to external sources), accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology Also. lhe Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level I or 2 of the fair value hierarchy, as these level 1 and level 2 risk management instruments are not included below, the gams or losses in tfw following fables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments

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Level 3 analysis

Consolidated balance sheets changes Level 3 assets (including assets measured at lair value on a nonrecurring basis) were 1 0% of total Firm assets at □ecember 31. 2016. The following describes significant changes to level 3 assets since December 31. 2015, for those Items measured at lair value on a recurring basis. For furrftor information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on Page 165

For the year ended December 31. ?016 Level 3 assets were $23 2 billion at December 31, ?01(>, reflecting a decrease of J8.0 billion from Decemher 31, 2015. This decrease was driven by set dements (including repayments and restructurings) and transfers to Level 2 due to an increase in observability and a decrease in the significance of unobservable inputs In particular.

• 14.0 bdfion decrease in trading assets - debt and equity instruments was predominantly driven by a decrease of Si 8 billion in trading loans largely due to settlements, and a ll 5 billion decrease in asset-backed securities due to settlements and transfers from level 3 lo level 2 as a result of increased observability of certain valuation inputs

- 12.1 billion decrease m gross derivative receivables was driven by a decrease in credit and foreign exchange derivative receivables due to market movements and transfers from level 3 to level 2 as a result of increased observability of certain valuation inputs

Gams and fosses

The following describes significant components of total realized/unrealized gams/dosses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2016. 2015 and 2014. For further mlormation on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 160-164. 2016

- There were no individually significant movements lor the year ended December 31. 20)6

2015

* 11.6 billion of net gams in interest rate, foreign exchange and equity derivative receivables largely due to market movements, partially offset by losses on commodity derivatives due to market movements

■ H 3 billion ol net gams in liabilities due to market movements

- Il 8 billion of losses on MSRs. For further discussion of the change, refer to Note 17 • 11 1 billion of net gains on trading assets - debt and equity instruments, largely driven by market movements and client-driven financing transactions

Credit and funding adjustments - derivatives Derivatives are generally valued using models that use as their basts observable market parameters These market parameters generally do not consider factors such as counterparty nonperformance risk, the Fum's own credit quality, and funding costs. Therefore, tt is generally necessary to make adjustments to the base estimate of lair value to reflect these factors

CVA represents the adjustment, relative to the relevant benchmark interest rale, necessary (0 relied counterparty nonperformance risk The Firm estimates CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result ol a counterparty credil event The key inputs to this methodology are (0 the expected positive exposure to each counterparty based on a simulation lhat assumes the current population of enisling derivatives with each counterparty remains unchanged and considers contractual factors designed 10 mitigate the Firm's credit exposure, such as collateral and legal rights of offset, (11) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads, and (in) estimated recovery rates implied by CDS spreads, adjusted (0 consider the differences in recovery rates as a derivative creditor relative to those reflected m CDS spreads, which generally reflect senior unsecured creditor risk

DVA represents the adjustment, relative to the relevant benchmark interest rate, necessary lo reflect the credit quality of the Firm The derivative DVA calculation methodology is generally consistent with ihe CVA methodology described above and incorporates JPMorgan Chase's credil spread as observed through the CDS market to estimate the PD and LGD as a result ol a systemic event affecting the Firm

FVA represents the adjustment lo reflect the impact of funding and is recognized where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. The Firm's FVA framework, applied to uncollaierahzed (including partially collateralized) OTC derivatives, leverages us existing CVA and OVA calculation methodologies, and considers the faci that the Firm's own credil risk is a significant component of funding costs.

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The key inputs (0 FVA are (1) (he expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (11) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with a similar credit standing as the Firm For collateralized derivatives. Ihe fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap rate given the underlying collateral agreement with the counterparty, and therefore a separate FVA is not necessary The following table provides the impact of credit and funding adjustments on principal transactions revenue tn the respective periods, excluding the effect of any associated hedging activities. The DVA and FVA reported below include the impacl of the firm's own credit Quality on the inception value of liabilities as well as the impact ol changes in the Firm's own credit quality over time

Credit tiprttmettu Derivatives CVA rjerivativK ova and FVA

Valuation adjustments on fair value option elected liabilities

The valuation of the Firm's liabilities for which (he fair value option has been elected requires consideiation of the Firm's own credit risk. DVA on fair value option elected liabilities is measured using (1) the current fair value of the liability and (ii) changes {subsequent to the issuance of the liability) in the Firm's probability of default and LGD. which are estimated based on changes in the Firm's credit spread observed in the bond market Fffeciive January 1, 2016, the effect of DVA on fair value option elected liabilities is recognized in OCI See Note 25 for further information. Assets and liabilities measured at fair value on a nonrecurring basts

At December 31, 2016 and 2015, assets measured at fair value on a nonrecurring basis were Jl 6 billion and 11 7 billion, respectively, consisting predominantly ol loans that had fair value adjustments for the years ended December 31. 2016 and 2015. At December 31,2016. 1735 million and 1822 million of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2015.1696 million and 1959 million of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively Liabilities measured at fair value on a nonrecurring basis were not significant al December 3], 2016 and ?0I5 For the years ended December 31, 2016, 2015 and 2014, there were no significant (ransiers between levels 1, 2 and 3 related to assets held at the balance sheet date. Of the 1822 million in level 3 assets measured at (air value on a nonrecurring basis as of December 3i. 2016-

• $462 million related to residential real estate loans carried at the net realizable value of the underlying collateral (1 e.. col lateral-dependent loans and other loans charged off in accordance with regulatory

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guidance) These amounts aie classified as level 3. as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values These discounts to the broker price opinions ranged flom 12% to 47%, with a weighted average of 25% The total change in the recorded value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the years ended December 3l. 2016. 201 b and 2014, related to financial instruments held at those dates, were losses of 1172 million. 1294 million and 1992 million respectively, these reductions were predominantly associated with loans For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e g.. residential mortgage loans charged off in accordance with regulatory guidance), see Note 14 Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at lair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value Financial instruments within the scope ol these disclosure requirements are included in the following table However, certain linancial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of IPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through tts deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed tn this Note

financial instruments for which carrying value approximates fair valup

Certain financial instruments that are not earned at (air value on the Consolidated balance sheets ore earned at amounts lhat approximate fair value, due 10 their short-term nature and generally negligible credit risk These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, shon-term receivables and accrued interest receivable, commercial paper, federal funds purchased, securities loaned and sold under repurchase agreements, other borrowed funds, accounts payable, and accrued liabilities. In addition. LI 5 GAAP requires that the (air value of deposit liabilities with no stated maturity (t c., demand, savings and certain money market deposits) be equal to their carrying value, recognition of the inherent funding value of these instruments is not permitted

Notes to consolidated financial statements

The fallowing mbi* (ift-wnis hi' law value ttierji cuv dosn'ir jnoi f lie ran i'nifi values and puruia'prJ f*i;r wines at D'.-i. ember 31. .'0: (i and 201 i' of financial assets Aim liabilities excluding Inancat instrument*! H121 are cameo al Mir i o'- a lecurrnirj tiasis. and men classih.-anon wuhm ihe (an value hierarchy For addinonji inlurmation regarding the (ma instruments within tne scope ol uus disclosure and the methods and significant assumptions used to estimate their lair see pages I 'jO-l S3 of llus Note

The ni.ijon;v of me Fum's Iriidiii*;-reiaied commnments are not earned a; :.ur[1] ri.tlance sheets, noi are they actively :r,ided ihf carrying value of in- wnuiesa and ihe estimated lau value ol these wholesa'e lendinji-ielaied commitment-.

^alut cm a ".-i unuig basis on icie as ipiiuAs for ihe *H[j] rio-l'cn-cembe< il JCil»

Islimaird Jiir value hierarchy

rstimated l*i value hierarchy

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Federal lunih soid and securities uurcnased uwle* rtMlf .lEn-ements

Set i m: in Dorr owed

Securities, held to-mafuiny

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es ol the giiarwilee l-alii:-

The Firm does not estimate the fair value ol consumer lending-related commitments m many cases the Firm can reduce or cancel these commitments by providing the borrower nonce or, in some cases as permuted by law without noure For a further discussion of the valuation of lending-related commitments, see page 1 L> l ol this Note

Financial luMiutt

I Herat fund; puicliasi-fl and securities loaned or Mid unrtn n-purchase agreements

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Otfirr bcricmfC limit
s issued bi

Accounts payable and other

Denefkial in

I onf-term deM and tumor iuboidNUird deferrable interest (K-benfures

148 0 38 9

257$

13* 144. R

Kd.C

(*) fair value is typical tt estimated using a discounted cash How model that incorpwates the characieusiics of the unpenning loans (indudinc puftcipal. comractua[1] interest tale and contractual lees) and other key inputs, including eiprcted lifetime ced.i losses interest ratrs. prepayment rites, and primary wipnaiion or secondary market spreads For certain loans if* fair value is measured based on the value ol the underlying collateral Tt* difference between the estimated tan value and carmine value of a (mineill asset or liability is the result ol the (lillveii: *netnodoloeies used to determine fair value as compari'it wuh carrying value lor eiampie. crrdit losses are estimated lor a tinancia[1] assets remaining life in a lair value calculation but are estimated for a loss emergence uer nd in the allowance for loan lw calculation, future kian income (mlnest and fees) is incanoriterl in a lair value calcutalion but is Generally no: considered in the allowance for ioan lotsi-s For a further discussion oi the rirm's metnodoMjes f or estima:m| the fair value Ot loans and lending related commit me nil. see Valuation hi ri a rent on pairs 150-153

Notes to consolidated financial statements Note 4 - Fair value option

The fair value option provides an option to elect fair value as an alternative measurement (oi selected financial assets, financial liabilities, unrecognized firm commitments, and wnuen loan commitments

The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis ot elected instruments (e g certain instruments elected were previously accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fan value basis, as well as to better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments

- Loans purchased or originated as part of securitization warehousing activity, subiect to bifurcation accounting, or managed on a fair value basis
- Certain securities financing arrangements with an embedded dei ivative and/or a maturity of greater than one yeai
- Owned beneficial interests in securitized financial assets that contain embedded credil derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes, which arc predominantly financial instruments that contain embedded derivatives, lhat are issued as part of CIB's client-driven activities
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value

Changes In fair value under the fair value option election

' total Fr. ' recorded"

The following table presents the changes in fair value included in the Consolidated statements of income tor the years ended December 31. 2016. 2015 and 2014. for items for which the fair value option was elected The profit and loss mlormation presented below only includes Ihe financial instruments Ihai were elected lo be measured at fair value, related risk management instruments, which are required to be measured at lair value, are not included in the table

^;^.^■:v^J'■^1ViT:- ■ '. '•". :' ." ' V.' '»1" ■ '• ■"v V-' ."•■v"-■.'■ ²?-nibf]■?.' ' V ■' ■ - :i 'I 2014 ".'■:'.,■"

■'Tottl.-:.

I*VA1 other value :.;.inunnt' recorded;

Federal funds sold and securities purchased under resale aerccmenis

Securities borrowed

Trailing asseti Debt and equity instruments.

Loans I eroded as trading

Offer oanfei in (air value

Other chances in fail value Other assets Deposits

Federal fund] purchased and sreunties loaned or sold under repurchase agreements

Other borrowed funds*[1]

Trading liabilities

Beneficial interests Issued by consolidated vibs

Other (labilities

Long-term debL OVA on fan value option elected liabilities Other changes in fair value"*

irnl specific

credit mV (0 pa'

tranuclum

revenue

(a) Ethane lanuary i, 2016. unrealized (aim/I loiiei) due io ir recordM in OCL while realized giiM/(losses) are recorded in and includes Ihe imaacl ol ihe Firm*! own credit quatlly nn Ihr wcenion subsequent in usance. See Ngtes land IS lor tun net minimal ion (PI long I*rm deM mtannul ai fair value predominantly relates lo aiucluiefl notes cwitajnuig embedded derivatives Although ih notes It actively managed, the gaj.is/Cknsesl reported m tin uble do not include the income linemen impact cA the nil maru

<c) Reported in moctgace tees arm related income

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Notes io consolidated financial statements

Deiermin.uion of instrument-specific credit nsh tor items for which a fair value election was matte Ihe lolloping describes how the gams and losses that are aiinbutable to changes m msirumeni'Specific credit risk, were determined

- loans and lending related t ommitmenis for floating-rate instruments, all changes in value aie attributed to instrument-specific credit risk =01 fixed-rate ■nstrumcnis. an allocation uf ihe changes m value (or the period is made between those changes in value mat are interest rate-related and t hanges in value th.i: are credit-related Allocations are generally based on an analysis of borrower-specific credit spread and recovery mlormation. where available, or benchmarking to simitar entities or industries

Lone, term debt Changes m value attniiuiablf tu instrument-spenfiL credit risk wen- aenvefl pnnrmafly Irom observable changes <n the Firm s credit soiead Resale and leuurchase agreements, securities borrowed ai'ieemenis and securities lending agieements Generally for these types of agreements there is a recuiremeiii lhat roiiateral he maintained with a market value eon31 io or m eicess ot th» ptincipal amount loaned, as a result, there would De no adjustment or an immaterial adjustment for inseumeni-spenfir credit risk related to these agreements

Structured note products by balance sheet classification and risk component

Ihe table below presents the fair value of the stiuciurcd notes issued hy the Firm ov balance v primary risk lyoe

December 3 L 2016

(in millions)	Lung ierm dew	Other bcwTowed tunas	Dencvls	loial debt	Com; ;c
				4.79b (70/16 i	
28.546 2 31*					
	16.796 S 3.267 7.36S				
Foreign eichange tauity Cnmmodiry Total structured notes	t 37.147 I	I.IIS S I1.S9			

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding The lollowing table leMects Ihe difference between the aggiei>ne fair value and the aggregate remaining conn actual principal balance outstanding as ol Decemher 31, 2010 and 2015, tor loans, long-term debt and long-term beneficial interests lor which the fair value option has been elected

' (unrierl - , - contractual Contractual. . principal .... pimcipal r*e value out amine, - aircmdira]

cmrraaual outstanding

Menace rual loans

74B S (Z.5901 (

Loans

Subtoul

AH other performing loam Loans' rural rt as trading asieis Loans

35,477 I.2S9

31.054 2.228

30 7110 ?S.1«4 (2 5961

?.771 I.Vii (19)

Lonc-term debt Principal protected debt

jl protected debi™

J 41,074 J 36.030 % (S.D44) » 37.047

i 21.602 «■ t 19.195 S (2.407) % I/[1]

NA 18.491 HA

Total long-term debt

I-tcrn beneficial interests

Vincipal protected debt

Total long-term beneficial interests

(a) There were no prrformmg loans that mnt mnrtY «Jrs or mrae past due as ot rtecrmbn 11.2016 and 201S respectively <b) Remannc contractual principal ts not applicable to nonorincipal-protet led notes, unlike prmciiul'protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity ol Ihe note nonpnncipal prutrcted structured notes do not obligate the Frrm to return a stated amount of principal at maturity, but to return an amount based on the perlormance of an underlying variable or derivative feature embedded in the note. However investors are exposed lo the credit nsk ol the Firm as issuer fur both nonprmcipal proiected and pnncinal

projected notes, (cl where the Firm issues principal-pro! cttrd nro-couocn oi discount notes, the balance ir/ticcts the contractual principal payment at maturity or. if aoplicable. the contractual prmipal payment at ihe [-irm's nexi call date.

At December 31, 20] 6 and 201S, the contractual amount of lending-related commitments lor winch the fair value option was elected was I* 6 billion for boih years, with a corresponding fair value ol $(118) million and 1(94) million, respectively For further information regarding off-balance sheet lending-related financial instruments, see Note 29

Notes to consolidated financial statements Note 5 - Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPUorgan Chase regularly monitors various segments of US credit portfolios to assess potential credit risk concentrations and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's nsk appetite

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U S geographic region, with a key locus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines, in the wholesale portloho. credit risk concerU/alions are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques For additional mlormation on loans, see Note 1 *.

the Firm does not believe that its exposure to any particular loan product (e g., option ARMs). or industry segment (e.g.. commercial real estate), or its exposure to residential real estate loans with high LTV ratios, results in a significant concentration of ciedit risk.

Terms of loan prod eras and collateral coverage are included in Ihe Firm's assessment when extending credil and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31. 2016 and 2015

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£ On balance neM *f-J \'

ofM-WC" V^UHm^J.^Oerhralrvc

14-4.644 141,11*

4]*.5*1 495.107

403.474 64t in-

54,797 SSM*1

Consumer, tidudini credit card n (rem customer!"

21.504 54.511 47,171

SS.46U 57 IS? 54.116

IOt.JIS 29,14 2 13.145 1T.1SO lt,120 19.4*0 11.B79

je.jj*

7.111 12.41* l.*64 1.941 4.941

135,041 I5.4JS 62.9SO 11,44* 4 7.AM 44.114 40Jr*9

29.611 11,2*3 70.401 19,0 29 1*.*1S 14.9U 11.41* 11.151 ■,732 3,1*7

excluding credit card

92 120

77.175

1*791 16 965

42.077

21 an

I2,*22 15.142 ICS.'* 21.SS6 13,751 2,20* f.ll*

1.012 1.127 1.615 2,177

:j I'd

It 70!

12,212 1111

10.11* ■ll

1J.U6* IS 217

10 630

SS:O

state t Municipal b>vt*> C rnli il tort Iranspor Utmn

*i a Mastici uelalt 1 wining

financial Markets infrastructure

All other"

Loam held for-sale and loans it fur vaue ■ecriviSIn liom customers and other"'

i 965 J.«6S 13 372

Totalunotlirr"[1] (1,951.105 t 194,7*5 % 44.071 t 97*.7Q2 SlB'jQ.»t>k S B37.799 t 59 677 j 943 jib

it) Receivables from customers primarily renmrni margin loans tu b'okerAge custo-nci that are collaterali/er; ttrmign assets n-.a:-ilined in ihe rhents hrnkr-raEr acrounts, as such no allowance Ii held against these receivables. These receivasles are recoiled wiiiun accrued mieresi and accounts -rrpiv.-iuir on the riritis Cumoldated balance sheets

lb} TW^rirvrane'rifl^eiertedlnllielaMeaioftMrflr^ not actual rankir^s of such eiposuret ai December 31. 7015

c) i*i addition loth* credit risk eiposuie lo si ales and municipal governmens (both U.S. and non U.S.) at net. ember 31.2011 and 2015, noied above, ihe firm held (9 I billion and 7 obUkm. respeciively. ol trading securities, 131 6 billion and (11 e billion, rripectiveri of AFSsecuimes, ard 11< 5 biihound H2 B billwr. respectively of HTU lecurlUci issued by u S state and municipal governments. For (urtner ir.formatnn. see Note 1 and Hole 12

d) Another includes, individuals. SPEs, holding companies, and private educit on and cmc organ Nations. For more in!o:maliun on eiposures mSPFs, see hole 16

e) For lurther Inter mil x>n regarding on-balance shew credi! concentrations by major product and/or geography, see Hose 6 and Not e 14 Tor information regard.ng concentrates ot off-balance sheet lending-refaied linanciai instramenti by maior produn. tee Kr4> 29

(l) LKiudes cash pUcedvr.th banks oltlSO.7 bllbn and 1151 □ billion, m Decembei 11,2016 and 2015 lesnectnwly. which n predominantly placed with various ceniral hanks, aumanly Federal Reserve Banks (g) Represents lending related Nmreial instruments.

Notes to consolidated financial statements

Note 6 - Derivative instruments

iicnv.i: vi' contracts denve :ner value Irom underlying asset prices, indices reference iaies. oltlt-r inpuis or a c;imt)inanon ol mese labors and mav eMws" roimterparües 10 risks and rewards 0' an underlying asset or liability y.'illioiil having ;n initially invest in own or exchange ll* jsset or liability jPMo-gan Chase makes mar\t>i\ id deriva lives tor clients anil also uses denvviives to hedge or manage its Own risk exposures Predominantly all 0' tne Firm's derivatives ait elitced mio lot market-making or risk management purposes

Marker making denvamv.

the inajuriiv ol the Frm's derivatives are entered into ior market'making ourposes Clients use derivatives to mii^aie or modify interest tale, credit, foreign exchange equity and commodity nsks The Mrm actively manages ihe risks from its exposure to these derivatives ny entering into othei derivative transactions or by purchasing 01 selling other fmaiiLial instruments that partially oi lully offset the exposure Irom client derivatives

disk management derivatives

The Firm manages certain markei and credit risk exposuies using derivative instruments, including denvatives in hedge arcounting relationships and othei derivatives that are used to manage nsks associated with specified assets and liabilities

interest rafe contracts are used to minimize fluctuations in earnings that are caused by changes m interest rates Fixed-tale assets and liabilities appreciate or depreciate in market value as interest rales change. Similarly, interest income and expense increases or decreases as a result of variable-rate assels and liabilities resetting to currpnt market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this vanahihty m earnings The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rale' fluciuahons on earnings

Foreign currency forward contracts are used to manage the foreign exchange nsk associated with certain foreign currency-denominated (i.e.. non-U S dollar) assets and liabilities and forecasted transactions, as well as (he Firm's net investments in certain non-U S subsidiaries or branches whose functional currencies are not the U.S dollar As a result of fluctuations in foreign currencies, the U.S dollar-pquivalent values of the foreign currency-denominated assets and liabilities or (he forecasted revenues or expenses increase or decrease Gains or losses on the derivative instruments related to these foreign currency denominated assets or liabilities, or forecasted transactions, are expected to substantially offset (his variability

Cniiimodiin's unit!act; ar? us"d id manage ihe y;ice ns* nl certain commodities Kivi-ntonei Gams or tosses on tivst derivative instruments are expected to sjjs:antially oiKei [he dep ʳfc:iat 1:111 or appreciation ol '.he related inventory

I'.ieliit derivatives are used 10 manage the counterparty uerlit risk associated wuh loans and tendmg .-platen commitments Ciedit derivatives coniDensate the purchase-l when the entity referenced m the com:ad eipenenres a (tpili: event, such cis bankruptcy n-' a failure to pay .111 obligation when Cue Credit de'iv.wves primary consist of COS For a tuither ri.snr;sioii o* credit denvatives. see the discussion m Hie Credit denvatives section on pages 184-I8f> nl this Note

ror mine information about risk management derivatives, see Ihe risk management denva:ives gams and losses table or. page 184 ot this Vote, and the hedge accounting gains and losses tables on pages l h; ʲ-]84 ol this Nole

Derivative 1 ounierparties ant! settlement types Die Tirm enters into OTC denvatives, which are negotiated and settled bilaterally with the derivative counterparty The Finn also enters mto. as principal, re-tain fcTD such as futures and options, and OfC-clearec derivative contracts with CCPs ETD contracts are generally standardized contracts traded on an exchange and cleared hy the CCP, which is the Firm's cotinteiparty f ʳopi 1 he inception of thp transactions OIC-c:leaied derivatives aie traded on a bilateral basis and then novated to the CCP tor clearing

Derivative clearing services

ihe Firm provides clearing services (or clients where the Firm acts as a clearing member with respect to certain derivative exchanges and clearing houses Ihe Firm does not reflect ihe clients' derivative cttntracts m its Consolidated Financial Statements For lurther information on Ihe Firm's clearing services, see Note 29 Accounting for derivatives

All tree-standing derivatives that Ihe Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value

As permitted under U.S GAAP, the Firm nets derivative assets and liahilmes. and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Tirm and the derivative counterparty For further discussion of the offsetting of assets and liabilities, see Note 1. The accounting for etianges m value of a derivative depends un whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at lair value through earnings The tabular disclosures on pages 176-184 ol this Note provide additional mlormation on the amount of. and reporling for. derivative assets, liabilities, gams and losses For further discussion of derivatives embedded m structured notes, see Notes 3 and 4 0"rii-j:ivt's designated as hvdgv> The mir applies hedge ac:oun!.ng 10 terrain derivatives executed for nsk management purposes - generally ini?reii rale, foteign ewhange and commodity derivatives Howevci. IPMorgan Chase does not seek to apply hengt [1] accounting to all ol the derivatives involved in the I irm's nsk management activities ror example, the Firm does mil apply hedge accounting to purchased COS used tn manage the credit risk of loans and lending-rrlairid commitments, because of the difficulties m qualifying such contrails as hedges For die same reason, tne Firm does noi apply hedge accounting to certain inleiest tale, foreign exchange, and commodity derivatives used for risk management pur poses

To qualify for hedge accounting, a derivative must be highly effective at reducing (he risk associated with the exposure being hedged in addition, for a derivative to he designated as a hedge, Ihe risk management objective and strategy must be documented Hedge documentation must identity the derivative hedging instrument, the asset or liability or lorecasted transaction and type ot risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and reliospectively To assess effectiveness, Ihe Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of II* derivative to the change in the fair value or cash flows of the hedrjed Hem The extern to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must he assessed and documented at least quarterly. Any hedge ineffectiveness (1 e . the amount hy which the gam or loss on the designated derivat ive instrument does not exactly offset the change in the hedged item attributable to rhe hedged nskj must be reported in current-period earnings If if is determined thai a derivative is noi highly effective at hedging the designated exposure, hedge accounting is discontinued

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vilut hedges c.ist' luw iii-di:.:-, .in.l ni'i ,rv',(ru:Ni h Ji'Mars-iii Cli.im- ci'.'S tar vjkn.- -ii.-lfj'-; ririiv.vry is r l xed-ra;'.- loujj-ienr d-ro. Ml- <;.?;unii^-, and rvf.aiii commod'ties inventing i'rr 'imliVlie i.nr vain"- h-.-i tin' changes m ihe imr value oi the dor v.v.ivt- and m value ol the- hedged item fur ihe n> tjfim; hedfinc -i rerci[tni7Pd m earning ll th> hed(:e if.dinjnsiup is terminated :ii»n (he adjustment 10 ihe henaso item continues to be 1 conned as pari ot ihe basis 0' ihe hi item, and lor henrhnark mteiesi rate netti; io eamiiii;': a*. .1 vm ᴵc adjustment Derivative amounts affecting earnings a ʳe rerofjiwen consul em wuh the classifit Jtmr. of itii: Hedged uem - umiunly net interest income ano pr.nnnai transact inns revenue

JPMoigan ci-..!sc uses case flow hedges primarily 10 hedge the exposure to variability m iuieiasteo rash Hows fiti'ii floating-rate assets and liahilmes and foreign ctir-ency denominated revenue and expense c ₜ,ᵣ cu^iymi; ₗₐri Mow hedges, Ihe effective pornon ol the change in the ta-r value ot the derivative is recorded in 00 and recognised m ihe Consolidated statements ot income wher the hedged casn Mows affect earnings Derivative amounts affecting earnings are recognized cnlisisieni will- ihe classilitaiion <ii the hedged item - primarily iiiieifsi iiKi'jiii" interest expense, noninterest revenue and compensation expen:.e Ihe ineffective portions ol ca ʳ.h Mow hedges aie immediately recognized m eamings jf :ne heoge reJ^i-r-nshin. is terminated, then the value of the derivative ■ecorilet; n AOCI 15 recogni7ed in earnings when tne cash hows i! ul were hedged alfect earnings For hedge relationship; mat are discontinued because a lorecasted transaction .s not expected 10 occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recofjru/ecf cammm

JPMorgan Chase uses nel mvesImeni hedges lo proler.l the value of Ihe Firm's net investment [1], in teitan non-U S subsidiaries or brandies whose lunctional cunonties arc not the U S dollar For foreign c urrency miaiilymj; net investment hedges, changes in tne fair value of the derivatives are reioroVri in the irflJisldilw: odiuslwfvils account within AOCI

JPMorgan Chase a Co 72016 Annual (report

Notes to consolidated financial statements

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The following table outlines the Firm's pnmary uses of derivatives and the related hedge accounting designation or disclosure category.

I-air value-hedge Casn flow hedge Fair value hedgv Cash tlu« iinjge Hfir investment hedte

t an value hedge

Corporate Corporate Corpora: (

Corporate

cia

\TTpeirf <file:///TTpeirf> Derivative .■*

in qualifying hedge accounting relationship

- •wieiesi rale — Hedge fixed rate asseis and liabilities
- ' interest rate — Hedjn? fluatirig raie assets and liabilities
- •Fbseign (jclunge — Heit|n? foreign currency-denominated issrrs and liabilities
- •Fcireign eicharee — Hedrje lorecasted levenue and eipmse
- • Foreign exchange — Hedge the value of Ihe firm's investments in non-U S dollar

Uan*gt specifically *Jen(llied risk exixnures no*, designatect in qualifying hedge acconnluvj relationships.

- • interest rale •Oodii
- * Cbmmodr.y

functnul currency en'.iues

- * Cixnmodity — Hedge commodity inventory

Uanacje the nsk of tl* morteage pipeline, warehouse loans and USUs	Spccififtd risk manage men:	CCD
Manage the credil ri;fc of wholesale lending eximsures	Sixrified risk managemcn',	CIS
Manage the nsk of certain commodities rela:ed contract; arid	Specilind risk management	r.ltt
Uinare ittt risk of certain otner specif ied eneis and luMimu	SwoW nit ma.-ufemenf	(.nrprrate

Marki't nuking and other Market-making and oilier

- • Wfereii rale and tareijjn etth^nje-
- •larknt-making derivatives and otlier activities
- ■Various — . uarket-rr.ikmg and related m
- • various — other derivatives

Notional amount of derivative contracts Trie loi lowing table summarizes the notional amount of derivative contracts outstanding as of December 31, 2016 and 2015

■.■:■;;'. ■ .. ■:■ woiloyw) monts". ■

t 21.000} 2A.lt <http://2A.lt>?

5.189 5.167

3,091 3.S0r,

l,*t7 3.806

OeceiiiW']L(iiWmTS)' ii'./IOU 201S

interest rate contracts Swaps

36.7J1

33J62

Futures and forwards written options Purchased options

Foreign eichange contracts Crosi-currency swaps Spot, futures and forwards written options Purcliased options

Total interest rale contracts

Credit d*rivallvei ʷ

3,159 3.19V S.341 5,0?«

Total foreign exchange contracts

Equity contracts Swaps

Futures and forwards written options Purchased options

Total equity contracts

Commodity ci

Swaps	102	83
Spot, futures aiirl forwards	130	90

Written options	83	115
Purchased options	94	if J
Total commodity cemtractv	409	409
Till derivative notional amounts	S 47.S37	\ 5rj.nS9

(a) For more mlormation on volumes and types of credit derivative contracts, see Iht Credit derivatives discussion on pagts 184-130
(h) Represents Hie turn of gross lung and gross shor'. third-party notion,Il denvatiw contracts

While the notional amounts disclosed above give an indication ot the volume ol the Firm's derivatives activity, [hp notional amounts significantly exceed, in ihe Firm's view, the possible losses that could ai ise ti om such transactions. For mosi derivative transactions, the notional amount is not exchanged; it is used simply as a relerence to calculate payments.

JPUc'funCh.isrCCo/ZCiKj Annual lienorr
Notes to consolidated financial statements

impact ol derivatives on ihr Consolidated balance sheets
Cross derivative payaMes
ot ■ lotal
natcd Designated derivative rdges . ■ as ledges payables
Trip Allowing table summarizes mfoimauon on derivative leiervahlos and payables (tielort and alter netting adjustments) :hat an? leflecied on me Tirm s Consolidated balance sheets as ol December ;\ 2016 and 20 IS oy accounting designation (eg. whether the derivatives were designated m qualifying hedge accounting relationships or not) and conn act type

f"ec-srar»diric>denyjrivc receivables andtlayacfes 1*

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4.406 I 605.963 2 0.64 S
1.289 213426
14.940
1)7 18,642

5.J32 S 922.616
71.302 f 547.894
1.294 21.666
23.271 233.823
4.939 38.362
6.272 70.281

64,078 S 109,020
S MI.557
79.645
712.137 34.440 U.505

t 916,7J4
, Drvitnitrt . df"»ative athen^s - rifinmbles

2JU4 S S'0.77S S I0.S1S ? lt.6*4 1,411
1.141 2J4 971 20.501
18.367 8.140
1 79 ?0,462 1.357

4,7)1 » 893.23* (49,23)

Derivatives netting
the lollowmg tables piesent as ol December 31. 20) t> and ?0\ 5 gross and net derivative :ece:v?.:ii?s and payables by contract and settlement ivue. Derivative receivables and payables as well as the related cash culiaierjl irom tne same counterparty, have been nrtted on the Consolidated balance sheets where the Firm has ohtamod an appropriate <egal opinion with respect to Ihe master netting agreement Where such a legal opinion lias not been either sough: w otnai'ied amounts are not eligible lor netting on the Consolidated balance sheets, and :hose derivative receiv.ittes and payables a*e shown sepa-atelv m the tables below
in addition to the cash collateral received and transferiuti that is piesented on a net basis with de-iv.-iilw ic-ceivilhlps and navables. the Firm receives and transfers additional collateral (financial instruments and cash) ihev amounts m.ngate counterparty credit risk associated with the Firm's derivative instruments, bu". are not eligible lor net preservation - collateral lhat consists of non-cash financial instruments (generally u s government and agency securities and other C7 government bonds) and cash collateral held at third party custodians, winch ai e shown separately as "Collateral not nettable on (he Consolidated balance sheets" in ihe tables belnw. up to the fair value exposure amount

- the amount of collateral held or translened that ecreeds the fair value exposure at the individual cnuntei party level, as ol the date presented, which is excluded from the tables below, and
- collateral held or transferred that relates to derivative receivables or pavahies where an appropriate legal opinion has not been either sought or obtained with respect lo the master neinng agreement which i; excluded Irom the tables below

; .">..;.-. - .■ -• ■ • v ; '"-■. ■ . Ioi* '■. ~ '. '. ?oi s ■'. ~ . ■

iiiiecest rate Credit
Fpingn eichange Commodity
' fa pa derivative receivables .
it ■ ■ -.. . ..< ■•'loial ;■ . wet ■ J-*
piated . ' Designated ' .dnrvarive . ' oerivative ■
edges ■ .-' as hedges receivables receivables'*:

1 605 531 1
S 069 61) 51 46S
I/O 075

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(GrossdeiTvatnvpayables : .■,:,I.»
ot; Total ' ■•
rated Designated derivative:. Hices ' as hedges •■ payables .-

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09 39/ 1 503 190 900
30.661 - 38.663
27 65) I 27 654
1.74? i 94J.912

ttaro*er 11.Tui millions) -
U.S GAAP nettable derivative recfwaNct interest rare cant nets

oic-cieaied Eichange traded"*
Total interest rat* contracts
Credit contracts.

■Gross .ontne .. Net
' derivative 'rjorisolitfaied : (trmame-ittmables balance sherb irceivahtes

S 365.227 f (347.173) 1 21.054 1 a 17 386
235.399 {235,761} 130 74b /S.0

23.130 5.746

241 (2271 14

(22.612) (5,7391

. balance sheets lecewabies

S (1Mb 506) 1 .'0 880 (2*b 7*1) 0

a) Balances delude strut tun-d notes ten wium the fair value option has been elecierl S
b) As permitted under u S GAAP, the f inn has elected lo nel derivative receivables and payables when a legally enforceable maslei ni'tiwg agreement firsts

Total credit contracts
foreign exchange contracts:

orc-deired Enhance traded*
Total foreign eichange contracts

OTC-cleared
ttthary-traded* total extuity contracts Commodity contracts.-

OTC-cleared E«change-traded 1* Total commodity contracts
Otrivatiw receivables with appropriate legal

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227,(13 (210.154) 17.459

20J4I (20.570) 290

11.439 (9.431) 7.001

32.307 (30.001) 2.306

11,571 (5.605) 5,966

6.794 (6.7661 28
11,365 112.1711 5,994
908,021 (858.531) *

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(30 330) 2 645

16.772) 8 229

(9.1001 91

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(59.677 (13S4J1

JPUorgan Chase t COJ7016 Ai

Notes to consolidated financial statements

U.S. GAAP nettable derivative payable! Interest rate contract!.

OtC-cleared Exchange'traded* 1
Total Interest rate contracts
CreeUt contracts:

Tsui credit contracts
feriign t xttunge cenrracts:

OK-cleared Exchange ■traded'"

Amounts netted*.:, ;-f>J:.\\v;;Vf -irl ₍s-'vAm
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* dM wain":;'.' Oevhami*-',-' *,' ' Tin

t 331,502 | (329.175) % 9.177 t 393.709 S (384.516) S 9.113

230,464 (230,461) 1 240.398 (240,369) 29

196 (175) II
223*4 (21^14) SJ.41 (5.641)
569.162 (559.963)
(28.100 (213,296) 1.1SI (1.1S1)

(43.019) 1,160 (5.969)

Liquidity risk 2nd credit-related contingent features In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPUorgan Chase to credit risk - the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation it is the policy ot JPUorgan chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated balance sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as ihe derivative contracts typically require the Firm tu post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades m the Fum's and its subsidiaries' respective credit ratings Certain derivative contiacts also provide for termination of the contract, generally upon a downgrade of either the Firm 01 the counterparty, al Ihe fair value of the derivative contracts The following table shows the aggregate fair value of net derivative payables related to ore and ore-cleared derivatives that contain contingent collateral or termination features that may be Ingcered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course ol business, at December 31. 2016 and 2015
etderivalive payables

Aggregate lair vaiui Collateral pail mi

OTC arid OTC-cleared derivative payables containing downgrade triggers

% 21.550 1 22.328 19,303 18.942

_Totat foreign exchange contracts

OTC-cleared Cichange-traderJ**

Total equity contracts

OTC-cKared Exttiane*traded* 1

Total commodity contracts

729.716 (214.463)

WMt) (9.414)

(19.559) 3.069 (9.89)1 1.107

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPUorgan Chase & Co. and its subsidiaries, predominantly JPUorgan Chase Sank, National Association ("JPMorgan Chase (lank. N A "), at December 31. 2016 and 2015, related to OTC and OTC-cleared derivative contracts with contingent collateral 01 tenninalion leatures that may be triggered upon a ratings downgrade Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payments requirements The liquidity impact in Ihe table is calculated based upon a downgrade below the lowest current rating of the rating agencies relerrcd to in the derivative contract

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

Perhtative payible» erith appropriate legal opinions

t 49.231 S 942,912 (192S)

» 52.79TJ (7.9SJ)

nt of additional collateral to be posted upon downgrade* 1

nt required to settle contracts with termination triggers upon oi

2,497 1.049

3.028 1.093

4Q.3W

i 44,83)

(ai Exchange-traded derivative balances lha! relate to futures contracts are settled daily

(bi NelderhQtivesreceivaUeirvludcdcashColUteraliiened o(S7l 9 billion and (73 7 blkona'. Decembei 31 2016 and 2015. respeciively Mel derrva:ivei payable included cash collateral nerted ol 157 3 billion and S61 6 Whor. a-lated loOIC and OTC-cleared derivauves il lietemher ll. J016 and 2015. respectively

(cl deludes all colla:eral relaled lo derivative insirummts where an appropriate le^al ennion has i»t been either toug.i: or bhnrnea «h Represents liquid security collateral as well as cash collateral held ■(I turd party cusiodiani related to derivative instruments where an appropnatr legal opinim has been obtained For some counterparties, (he collateral inmurits ol financial i.nstrumenls may e^cerd the rir-rivatiw it-r nvables inl derivative PlylUrs balances. Where this is the case, tl* total imcniul repor:ed is limited to :he net dcr ivative recervadlt^ and noi derivative payables balances with dial count erparly

<e'i ncdvaiive payablrs collateral relates only to OTC and OTC-(feared neirvative instruments. Amoun'.s eiclude colli! Tit I transfi-rrcd tetaled lo eKhange Haded deriva'jve instrument

Derivatives executed in contemplation of a sale of the underlying financial asset

in certain instances the Firm enters into transactions in which tt transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation ol the initial transfer The Firm generally accounts for such transfers as collateralized financing transactions as described m Note 13, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U S GAAP The amount ot such transfers accounted for as a sale where the associated derivative was outstanding at Oecember 31. 2016 was not material

JPMorgan Chase i Co./2016 Annual Bene*;

Notes to consolidated financial statements

Impact of derivatives on me Consolidated statements of income

Tne following tallies tiroviilfl ininrmaunn re'ated to (jams anrt tosses loro'ded on derivatives ua^ed on ttien nedge accounting designation or purpose

f air value tieane pains and fosses

ine following larjles picsent rJenvative .nsirumcnts by contran type used in lair value hedge an (uniting relationships, as we as pte-tax gams/(losses) recorded on such derivatives and ihe relaled hedged items lor tne yeais ended net ember 31. 2016. 2015 and 201-1. respectively The nrm includes gams/dosses) on die hedging derivative and We 'elated hedged item m the same line item m the Consolidated statements ol income

Gaim/ticites) recorded m income

Cash ///ci nettie gains and losses*

The lollowmg utiles present denvaiive instruments t>y cuntiact ;vi*e used r. caili Mow hedge accounting ret.i; Kinships and the ore-tax gams/flosses) recorded on surh derivatives lor tne veais ended r)erembe< 31 -'111 6 ."O; 5 ;rio 20l 4 respectively The Finn includes the gain/doss) on the hedging denvaiive and ihe change m (ash Mows on the tlfdfied lien- n the same line item in the Consolidated statements of mcome

- loial change eiOCJ

GainV(lcruesl recorded m iucoh* am othe

Derivatives- Hedge

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reclassified Irom f Koided diiectN Tout income

AOO lo income ' w income"* statement imaacl

, Gains/Oowsl ircoided inmiorne ando;hei cnmprhensiveincorneJIlms;.

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Contract type interest rate 1-1* Foreign eictunp" Com modify**

Tout

Contract type

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Vear ended Oerembej 11,7014 (m Billions) .

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i " P;■■. WIT-i . (Utemert— ' '.Hedge tjQuded -"
1.30S I7S)I
. Derivatives HeiHed items . Impan-. '■ «xffecirveness*.'cc*rroneil's**
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(9,IBS)
173
1.0/)

Foreign eichange* [1] Commodity™
1.246 I

te (*lirjon*))iiiirresl ratensi o< ftied-rate long term debt and AJ-S

;o tne hedged item ihisexpcnseisrecoroedinni

(a) Pnmarilt consists ol hedges of the benchmark (e.g London interbank Offered R.
secunlies. Cains ana losses were recorded in net interest income (bl Excludes ihe amortu-ilmn eipense assnciaied nth the inception hedge accounting adjustment apphec
interest income and substantially offsets the income statement impact of the e (eluded components, (c) Primarily consists ol hedges ol the loieign currency risk ol long term rjebi and AFS securities for changes m spot foreign currency rates. Gains and losses relited to the derivatives and the hedged items due lo Cliangrs in foreign currency rites, were recoroed primarily in principal transactions revenue ana
nel interest mcome
(dl Consists of overall fan value hedges ol physical commodities inventories that are generally cairied at the lower of cost or market (market approximates
(air value) Gains and losses were recorded in principal transactions levewe (el Hedge ineffectiveness is Ihe amount by which Che gam or loss on tne designafecf drrrvarive instrument does not tut (tf offset the gam or loss on the hedged item annbuiable to the hedged nsk. (f) The assessment ol hedge effectiveness exiludes certain comixsnents of the changes m fan values of the derivatives and hedgi-n Hems such as lufward points on loreicn exchange forward contracts and time values.

;' effective potion, ' Ineflectiveness t
74
1

Contract type interest rate™ Foreign eKhanfc [1]*
OS

(a) Primarily consists of benchmark inter m rale hedge* of UK* indexed floating-rate net interest income, an! tor the lorecatied transactions Hat the Firm determined di occurring, in other income
(hi Primarily consists of hedges of the loieign currency risk of non U S. dollar-denomina'.ed revenue and expert'* tne income staiemni classification ot
gains and losses follows the hedged Item - primarily noninteresi revenue and compensation eipense (c) Hedge inellectivcness is the amount by which (he cumulative gam or loss or tne designated derivative instrument ewrefls rhe D'esent vaiuc ol the cumulative expected change m cash (lows on the hedged Item attributable to tne netiged risk.

The Firm did not experience any forecasted transactions that failed to occur for the years ended 2016 and 2014 in 2015. the Firm reclassified approximately J150 million of net losses from 40O to other income because tne Firm octer mined that it was probable that the forecasted interest payment cash flows would not occur as a result of the planned reduction in wholesale non-operating deposits.

Over the next 12 months, the Firm expects that approximately ll 51 million (after-tax) ol nel losses recorded in AGO at December 31. 2016, related to rash flow hedges will be recognized in income For terminated cash flow hedges. Ihe maximum length of time over which forecasted transactions are remaining is approximately six years For open rash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately one vear The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities

Gains and losses on derivatives used tor specified nsk management purposes
1.174 i 12*2)
The following table presents pre-tax gams/dosses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans. USRs. wholesale lending exposures, foreign currency denominated assets and liabilities, and commodities-related contracts and investments

DSJ i 2.30S
910
Total
Foreign exchange*-'
Commodity**
93ft i 2.3*9

(a) Prmanly reprevnti irttini rale dermalives used to neasc rhe intere%l rate risk inherent in the mortgage pipeline, ■rarehnusi' loans and USRs. as well as wi in en commitments to oi iginate warehouse loans. Gams and losses were recorded predominantly in mortgage fees and related income
(bl Relates to credit derivatives used to mitigate credit risk associllrc with lending eipntures in Hie. Firm s wholesale businesses These derivatives do not include credit derivatives used lo mitigate counterparty credit risk arising from derivative rectivalries. wliich is included in gams and losses on detivalives related to mariel making activities and olher derivatives Gains and losses mre recorded in principal transactions revenue
(c) Primarily relates to derivatives used to mitigate Icarign exchange risk of specllieri foreign currency denominated assets and liabilities Gams and losses were recorded in principal u inactions revenue
tdl Pnminly regies to commodity derivatives used io mitigate eneigy price nsk associated with energy-related contracts and investments. Gains and losses were recorded in principal transitions revenue.

Cains and fosses on derivatives refatedto market-making activities and other derivatives
The Firm makes markets m derivatives in order to meet the needs ot customers and uses derivatives to manage certain nsks associated with net open risk positions from us market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 for information on principal transactions revenue

Credit derivatives
Credit derivatives are linancial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller) Credit derivatives expose the protection purchaser lo the creditworthiness of the protection seller, as the protection seller is required to make payments under (he contract when the reference entity experiences a credit event, such as a bankr uptcy, a failure to pay its obligation or a restructuring The seller of credit protection receives a premium for providing protection but has the risk that the underlying instiumcnl referenced in the contract will be subject lo a credit event The Tirm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives lor two primary purposes First, in its capacity as a market-maker, the Firm aclivc'v manages a pofltotio ol credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers Second, as an end-user, ihe Firm uses credit derivatives to manage credit nsk associated with lending exposures (loans and unfunded commitments; and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses Following is a summary of various types of credit derivatives.

Credit default swaps
Credit derivatives may reference the credit of either a single reference entity fsingfe-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage ihe default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments Like the S&P 500 and other market indices, a CDS index consists of a portfolio of COS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in ihe credit markets, if one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios ol reference names or against customized exposure levels based on specific client demands- for example, to provide protection against the first 11 million of realized credit losses m a $10 million portfolio of exposure. Such structures are commonly known as tranche COS

For both single-name COS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a COS contract neitfier party to the CDS contract has recourse to ihe reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs

Ciedit-related notes
A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference enirty or an index Undei the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays pet iodic payments to the investor, based on the credil risk of the referenced entity The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event il a credit event occurs, the issuer is not obligated to repay the par value of the note, bul rather, the issuer pays the investor the ddlerence between the par value ol the note and the fair value of the defaulted reference obligation at the time of settlement Neither party to the credit-related note has recourse to Ihe defaulting reference entity

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as ol Decembei 31. 2016 and 2015 Upon a ciedit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value ol the reference obligation at the time of settlement The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities Other purchased protection referenced in the following tables includes credit derivatives bought on related, bul not identical, reference positions (including indices, portfolio coverage and other relerence points) as well as protection purchased through credit-related notes

Hie i irm does no: use mU1un.1i <http://mU1un.1i> amounts of tredi: derivatives as the primary measure ol ink management lor sucn derivatives, h ecu si[1] ;;ie notional amount does not tane into account the :>'oii.ihilnv u'. the occurrence of a ciecli: event the recovery value of the relerence obligation or relaled cash instruments and economic hedges, each ol which reduces in the rn m s view, the nsks associated with such derivatives

Total credit derivatives and credit-related notes

Uininum rurran/Hotionil amount

Credit derivatives

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Nei protection Other -(utel/ pnxecion Putluirt[b]. • purchaser][1]*

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Credit derivatives

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Total credit derivatives

Credit-rented notes

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The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives and credit-related notes as of December 31. 2016 and 2015. where JPMorgan Chase is the seller of protection Ihe maturity profile is based on the remaining contractual maturity of the credit derivative contracts ihe ratings profile is based on the rating of (he reference entity on which (he credit derivative contract is based The ratings and maturity profile of credit derivatives and credit-relaled notes where JPUorgan Chase is the purchaser of protection are comparable to the profile reflected below

(313.586) (170.046)

t(211.6H) (107,955)

(39.211) (23.317)

(694.555) (301.Jit)

(343SS) S 4.78* (1.570) (314)

Protection sold - credit derivatives and credit-related notes ratings[u]/maturity profile
i (311.643) i (553,631) f (62,598) S (997.173)

(titt ratine of Investment-trade Moninvea men; -gr ade
- Total notional
Risk rating of reference entity

*Jn*Wln»nt-r*n>* *I (307,71 J) I (iW.???l*

Hownvc;;n>ent-gride (109 195) (245.1511

(46 970/ (71 08S)
I (I.0SJ.4CS) (375 4311

(J.SJV 10.823

16.025 I (U.42S>
1(416.406) J (944.378)

(6.B36J (18.991)

111 collateral received by the I ■

Note 7 - Noninterest. revenue

Investment banking fees

The following table presents the tnmpnnems 0! mvesin banking fees

underwriting

loul underwntinf

Advisory

Total investment banking lee

Underwriting fees are recognized as revenue when the Firm has rendered all services 10. and is entitled to collect the lee from, the issuer, and there are no other contingencies associated with the fee Underwriting lees arc net of syndicate expense, the Tirm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, liming and yield criteria Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned

Principal transactions

Principal transactions revenue is driven by many laciors. including the bid-offer spread, which is the d'ffeiencc between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell thai instrument. It also consists of ihe realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted (or under the fair value option) primarily used in client-driven market-making activities and on private equity investments In connection with its ciient-dnvcn market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including- (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity nsk, and (c) other derivatives For further information on the income statement classification of gams and losses from derivatives activities, see Note 6

In the financial commodity markers, the Firm transacts in OTC derivatives (c.g, swaps, forwards, options) and ETD that reference a wide range of underlying commodities In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and mav hold other commodities inventories under financing and other arrangements with clients.

1 nc following [able m events al: realized and :m'eah?ed rjjir.s and losses recur Med --n ^n'icmal transacircms revenue Ihis :able e<rluites interest income and interest e>nense cm tradmg assets and liabilities winch are an integral part ol :ne overall perlormance of the rums cl'ent-dnven mame!-making activities See Note S >o' further information on interest income and inteiest expense Trading revenue is presented primarily »y instrument ivne Ihe Firm's client-driven niai kei-making businesses generally utilize a variety ol instrument lyrics in connection w;;h men market-making and relaled nsk uicinagemen: activities accordingly, ihe trading revenue presemed m the table Delow is not representative ot tne total revenue ol any individual line of business

trading revenue by in

2.325 7.09b

7.994 1.06/

Principal transact tuns

Total trading leveuui

1 11.S66 1 in 40S (10.'.II

Lending- and deposit-related fees

The following table piesenls the components of lending-
t 1 148 i 1.307
and deposit-related tees.

year ended Decembei 31, (in millions)

lending relaled fees Deposit relared tees

ToUlleiyJing-airtdeppinrelaiedfees 15,774 1 5 694 j 5.801

Lending-related tees include lces earned from loan commitments, standby letters of credit, financial guarantees, and othei loan-servicing activities. Deposit-related fees include lees earned in lieu of compensating balances, and fees earned from per forming cash management activities and othei depusn account services Lending- and deposit-relaied fees in this revenue category are recognized over the period in which the related service is provided

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Notes to consolidated financial statements

Asset management, administration and commissions The following table presents Firmwide asset management, administration and commissions income.
t M*S 1 9,401 1 9.169

war ended Oecemfjer Ji.-JiV ■ ■-* ir

Asset 1

9J01 1.915

9.646 2.179

investment management fees** All other toe; management lees*
Total a»et management fen

2.304 2.270 1.435 1.836
2,151 1.324

Total administration fees*[1] Commissions and other feet Brokerage commissions Alt other rpmmissions and Ices

% 14.591 J 15.509 » 15.931

a) Rtereicnti Ices earned Irom managing asstti on behalf ol the Firms events, including Investors in Firm-seornored funds and owners at •etaraieif managed invcicmer* accounts.
b) Represents ftn for services that an ancillary to invesimem nanage:neni serwets, such at comnnssams earned on tne sales or distribution of mutmJ fundi to dents.
c) Predominant lv irtludes fees for Custody, we ur It lei lend int. himii serwm and tccuriim clearance.

This revenue category includes fees from investment management and related services, custody and brokerage services, insurance premiums and commissions, and lees from other products and services. These fees are recognized over the period in which the related product or service is provided Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Tirm has contractual arrangements with third parties to provide certain services in connection with its asset managemeni activities Amounts paid to third-party service providers are predominantly expensed, such lhat asset management fees are recorded gross of payments made to third parties Uortgage fees and related income This revenue category primarily reflects CCB's Mortgage Banking production and servicing revenue, including lees and income derived from mortgages originated with the intent to sell, mortgage sales and servicing including losses related to the repurchase of previously sold loans, the impact of risk-managemenl activities associated with the mortgage pipeline, warehouse loans and MSRs. and revenue related to any residual interests held from mortgage securitizations This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale. as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option changes in the fair value of MSRs are reported in mortgage fees and related income. For a further discussion of USIfs,, see Note J 7. Nei interest income Irom mortgage loans is recorded in interest income

Card income

This revenue category includes interchange income Irom credit and debit cards and nei fees earned from processing card transactions for merchants Card income 15 recognized as earned. Costs related to rewards programs are recorded when the rewards are earned by the customer and presented as a reduction to interchange income Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-monlh period.

Credit card revenue sharing agreements The Firm has contractual agreements with numerous co-brand partners which grant the Firm exclusive rights to market 10 the customers or members of such partners. 1 hese partners endorse the credit card programs and provide their customer or member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range trom five to ten years

The Firm typically makes incentive payments to the partners based on new account originations, sales volumes and ihe cost of the partners' marketing activities and awards Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on sales volumes are deducted Irom interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income
Operating, lease income
Other income on the Firm's Consolidated statements of income included (he following

Vearer«JedOecemljeT Jl.finmuloreJ,aitV/iViOlS :'J. ■ 2014
12,724 (2.081 1 1.699

Operating lease income is recognized on a straight-line basis over the lease term.

Note 8 - Interest income and interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability

The following table presents the components ot interest income and interest expense

S 14,634 i 33.134 S S.S1I 6 bbO 1.766 1,706

32.218 7.617 1.423

y.y':-;. lj ',/ZOl».y>'\' 20iSi- ^V{20U:

interest income

7.304 7,2«

2,263 (311) 1*SJ

8.PS6 6.621

I.S9? (532) 1.250

loans'" Taxable securities Hon taxable securitii

Total securities Traduw. assets

Federal lunds sold and securities purchased under resale

Securities borrowed*[1]

TotaJ interest Income

Interest expense interest btarintj tSeposits Federal funds purchased an securities loaned or sold u rerwrchav agreements

Commercial paper
Total Interest expense

7.897 43.634
13.110 t 1,827
Met Interest Income

Provision for credit Ids:

1.170 5,544

1 Mil 1 7.461 i
46X83 1 S.361

t pwentse price discounts

ire tai eicmpt tor u S lederat income tai

Ine >mertsl inconie. for the yuais ended and 2014, it a mull ol client driven denu ned wuh the impact of law interest rales. 1 neiative interest cxiiense on the

corresponding securities loaned is recognized in inines! eipense (dl Largely margin loans, (e) Inclines brokerage customer payables

interest income and interest expense includes (he current-period interest accruals for financial instruments measured at fair value, except for derivatives and financial instruments containing embedded derivatives that would be separately accounted lor in accordance with u S. GAAP, absent the fair value option election, for those instruments, all changes in (air value including any interest elements, are reported in principal transactions revenue For financial instruments that are not measured at fair value, the relaled interest is included within interest income or interest expense, as applicable

Note 9 - Pension and other postretirement employee benefit plans

The Firm has various defined benehi pension plans and OPEB plans that provide benefits to its employees These plans are discussed below Defined benefit pension plans The Firm has a qualified noncontubutory u S defined benefit pension plan that provides benefits 10 substantially all U.S employees The u 5 plan employs a cash balance formula in the form of pay and interest credits 10 determine the benefits to be provided at retirement, based on years of service and eligible compensation (generally base salary/ regular pay and vanahle rash incentive compensation capped al (100.000 annually). Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest alter three years ot service The Tirm also offers benefits through defined benefit pension plans lo qualifying employees in certain non-U.S locations based on factors such as eligible compensation, age and/or years of service

ti n ihe Firm's polity to fund the pension plans rn amounts sufficient to meet the requirements under applicable laws The Firm does not anticipate at this time any contribution to the U S defined benefit pension plan in 2017. The 2017 contributions to the non-U 5 defined benefit pension plans are expected to be J44 million ol which 128 million arc contractually required

JPMorgan Chase also has a number ol defined benefit pension plans that are not subject to Title IV ot the Employee Retirement income Security Act The most significant of these plans is the Excess Retirement Plan, pursuant to which ceriam employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan, no further pay credits are allocated undei this plan The Excess Retirement Plan had an unlunded projected benefit obligation ("PBO") " in (he amount ot %21 !i million and $23 7 million. a(December 31, 20] 6 and 2015. respectively

Defined contribution plans
JPMorgan Chase currently provides iwo qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U S locations, all of which are administered in accordance with applicable local laws and regulations, the most significant or these plans is the JPMorgan Chase 401 (k) Savings Plan (the "irji (k) Savings Plan"), which covers substantially all U.S employees Employees can contnhute to the 40) (k) Savings Plan on a pretax and/or Roth 401 (k) after-tax basis The JPMorgan Chase Common Stock Fund, which is an investment option under the 401 (k) Savings Plan, is a nonlevera.ged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5W of eligible compensation (generally base salary/regular pay and vanahle cash incentive compensation) on an annual basis Employees begin to receive matching contributions

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Notes to consolidated financial statements

alter completing a one sear of-set vice requueineni Employees wifi lolal annual cash compensation of SISO.000 ol more are not eligible lor maictum; contributions Matching contriluilons vest after three years of service the flOlik) Savings Plan also permits discretionary profit-sharing contriluilons hy t>al negating companies lor tcriain employees, subject tn a specified vesting schedule

OrtB plans

Jt'Morgan Chase offers postretirement medical and life insurance henef us to certain relirees and postretiremenl medical benefits lo qualifying ll S employees lhese benefits vary w:'.ll the length of service and the dale o' hue and provide loi limns on lhe Firm's share of covered medical benefits lhe medical and life insurance benefns are both contributory Effective January l. 201], lucre was

a transition ol certain Meticale ••ligible ictirees bom JPMorgan Chase group sponsored coverage to Medicare dchanges as a resuli of ihis change eligible retirees will receive a Healthcare Reimbursement Account amnunl each year if they enroll through the Medicare exchange. The impact of mis change was not material Postretirement medical benefits also are offered lo qualifying U.K employees

IPWorgan Chase's U.S OPEB obligation is funded with corporate-owned life insurance ("COII") purchased on the lives of eligible employees and retirees While lhe l irm owns the COL l policies. COIi proceeds (death benefits, withdrawals and other distributions) mav be used only to reimburse the Firm for us nel postretnement benefit daim payments and related admimstiative expense The U K OPED plan is unfunded

G.ims and losses

For (be Firms dehned henefn pension plans, fan value is used to determine (lie expected return on plan assets Amortization of net gains and losses is included in annual nei periodic benefit rosl if, as of lhe heginnmg of ihe year the net gam or loss exceeds 10% ol the greater of lhe PBO or the fair value of the plan assets Any excess is amortized over the average luture service period ol defined benefit pension plan participants, which for die U S defined heneht pension plan is currently seven years and lor ihe non-U S defined benefil pension plans is die period appropriate lor the affected plan. In addition, pnor service costs are amortized over the average rpinaimng sprvice period ol active employees expected to receive benefits under the plan when the prior service cost is first recognized The average remaining amortization period for the u S defined henefil pension plan lor current prior service costs is three yeais

The following table presents pretax pension and Of(,'£t amounts recorded m AOCI

Defined benefit pmsion plans ■■

Al of tt tar 0» year ended uecembn 31. (nrilhons) i- ■ • "

Ctxuc" in benefit obligation Benefit obhgation. beginning of yen Benefits earned during the rear iIinrtt cost on benefit obligations Special lemwiation benefits Emprovee contributors nm ga>n/l less) Beneiilt paid Plan settlements

[■petted Medicare Part 0 subsidy receipts Fcf eign exchange impact and other

Benefit obligation, end of year

Change in plan assets

Fair value of plan assets. beginning of yeal

Employee contributions

Plan set dements

foreign exchange impact n

OPEB plant™ V;

t 13.347) S (3 C40) * (744) ((S42)

((1,378) J (3.3471 I (70t) t (744)

3.71S (1.BS5 (1.9(1)

(760) (126) (120)

(21)

(SI9) (1911

3.511 I 1.956 1 I.BSS

(1 1161 (130961 ((5S1l 1 CM 31

(3 0B2I ((3 0211) ((543) I ISCUI (131 1

Nel gain/doss)

Prior service credi1/lcos:j

At cumulated other comprehensive income/liossi, pretax, end ol year

The following table presents the components ol net periodic benelit costs reported in (he Consolidated s(atements of income and other comprehensive income for the Firm's U.S and non-U S defined benefit pension, defined contribution and OPEB plans.

Itm ended Decamtoer 11: fln mil mots)

S 29* 1 340 (781

11 11 (105) (10b)

(8*1) (929)

Components of nel period benefit colt Benefits earned during the year interest cost on benefit obligations Expected return on plan assets Amortization:

Net (gainl/lots

122 (1B6)

Piior service cost/dredil)

Special termination benefits

Settlement toss

Net periodic defined benefit cost Other defined benefit pension plant"

Total defined benefit plans Total defined contnbutwn plans

It>.1 (37S ((741 ((74) ((64)

Acuminated benefit obligation, end nf yi

a) Represents plans with an aggregate overfunoed balance of J> aggregate underfunded balance of (639 million and (6)6 m

b) At Oecember 31.2016 and 2015, apt" oil mater" (WOmillw participating annuity contracts.

(C) At December 11 2016and?015 defined benefrt pension pi, resnetlivery, of accrued receivables, and (224 miNun and (I

(d) Includes an unfunded accumulated postretilement benefit oti U tplan.

((12.0*2) Jill.774) S (3.359) ((3.327)

bilim and (4 i billion at December ll, 2016 and 2015. respectively, and plans witti an mat Decembei ll.2016and.'01S respecilvely

nd (533 million respectively of US plan assets included par impawn nghts under

(mounts ma: were not measwed at falt value included (110 million and (74 imUrjri. million rrspectwert. of accrued laWilles. Iorl/5 plans

ition of (35 million and (32 million al December 31.2016 and 201S, lespectivetv. lor the

Changes wi ptan assets and benefit obligations

recognized m other comprehefnlw Income Net (gain)/lo« arising durmg the year Prior service credit anting during the year Amortization of net loss Amortization of prior service (tostl/credit

Foreign exchange impact and other

Total recognized in other comprehensive income

: 255 (111 (1 64S

51

(ZJS) (2471 (25)

S4 ((716) (1./14

(190 ((94) (I 528

(a) Includes various defined benelit pension plans which are individually immaterial JPMorgan Chase ft Coy2016 Annual Hvport

Notes to consolidated financial statements

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost m 2017 are as follows,

t^rjl^^l 'y-^ -^^ T^ -** S'-l"^'.^-:^* ^t* -^ ™ ^^f3e^r^erj^eneftj

Wieaii»^y»;^Sy> ʳiv^

■ i4bn-U.S->T-I.V:v OS. 7': •

Net toss/lgim)

Prior service cost/lcredi:)

The following table presents the actual rate of return on plan assets for the U S and non-u s defined benefit pension and Opeb plans.

7 29% 1.07-20 60% (0 481- 4 92%

.Tear ended December 31.' ^.'^:

Actual rate of return-Delined benefit pension plans OPEB plans

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U S. and non-U-S. defined benefit pension and OPEB plans, as of and for the periods indicated

Weighted-average assumptions used to determine benefit obligations

■ V-".': .-•*on-U.S> ʳ-V;V;¡; .-

si.:.

4 50% 0 AO - 2.60%

4.30%

4.20

2.30

Discount rite-Defined benefit pension plans OPFB plans Sate ol compensation increase Health care cost (rend rate-Assumed lor next year Ultimate

year when rate will reach ultimo

Plan assumptions

JPMorgan Chase's expected long-term rate of return for u S defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term t \ 0 or more years) returns for the vanous asset classes, weighted by the asset allocation Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns Equity returns arc generally developed as the sum of inflation, pxpected real earnings growth and expected long-term dividend yield Bond returns are generally developed as the sum of inflation, real bond yield and nsk spread (as appropriate), adjusted for the expected effect on returns from changing yields Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration also given to current market conditions and the short-term portfolio mix of each plan

For the JJ K defined benefit pension plans, which represent the most significant of the non-U S. defined benefit pension Plans, procedures similar to those in the U.S are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets The expected long-ferm rate of return on u K plan assets is an average or Projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk Premium above the risk-free rate The expected return on "AA" rated long-term corporate bonds is based on an implied yield tor similar bonds

The discount rate used in determining the benefit ohhgation under the U.S defined benefit pension and OPEB plans was provided by the Firm's actuaries This rate was selected by reference to the yields on portfolios of bonds with maturity elates and coupons thac closely match each of the plan's Lrejected cash (lows, such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date, in years in which these hypothetical bond portfolios generate excess cash, such excess is assumed lo be reinvested at the one-year lorward rales

implied by the Uercer Yield Curve published as of the measurement dale The discount rate for the U.K. defined benefit pension plan represents a rate of appropriate duration from the analysis of yield curves provided by the Firm's actuaries.

At December 31. 2016, the Firm decreased the discount rates used lo determine its benefit obligations for the U.S defined benefit pension and OPEB plans in light of current market interest rates, which will increase expense by approximately 145 million in 2017 The 2017 expected long-term rate of return on U.S defined benefit pension plan assets and U.S. OPEB plan assets are 6.00% and 5.00%, respectively For 2017. the initial health care benefit obligation trend assumption has been sel at S 00%, while the ultimate health care trend assumption and the year to reach ihe ultimate rate remain al 5.00% and 2017. respeciively. unchanged from 20J 6 As of December 3 J, 2016, the interest crediting rate assumption remained at 5.00% and the assumed rate of compensation increase was reduced to 2 30%

lalS-'-.F.:'c 201*

Weighted-average assumptions used to determine net periodic benefit costs

Tear enSrdMcejmfaer 31, '.

5 00%	0 90 - 3.70%	1 00 - 3 60%1 10-4 40%
5 400		
7 00	0-M - 4 60	0 90 - 4 SOI 20 - 5 30
6 25	NA	NAHA
1 SO	2 25 - 4 30	I Jb - 4 ;o 2 75 - * 60

JPMorgan Chase's U S defined benefil pension and OF'EB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate With all other assumptions held constant, a 25-basis point decline in the expected long-term rale of return on ll S plan assets would result in an aggregate increase ot approximately (40 million in 2017 U S defined henefil pension and OPEB plan expense. A 25-basis point decline in lhe discount rate for the U.S plans would result in an increase in 2017 u S defined benefit pension and OPEB plan expense of approximately an aggregate 131 million and an increase m (he related benefil obligations of approximately an aggregate (316 million A 25-hasispniut decrease in the interest crediting rate for the U S. defined benefit pension plan would result in a decrease in 2017 U S delined benefit pension expense of approximately $36 million and a decrease in the related PBO ol approximately (160 million A 25-basis pomi decline in the discount rates for the non-U S plans would resuft in an increase in the 2017 non-U S defined benefit pension plan expense of approximately $ 12 million

JPUonjan Chase ft Co./70) 6 Annual q;p

Notes to consolidated financial statements

investment so ategv and asset allocation ihe Firms U S delined benefit pension plan assets are held m trust and are in veiled in a well-diversified poniulio ol equity and lined income securities, cash and cash equivalents and alternative investments (e g ■ hedge funds 'private equity, rea'estate and real assets) Nun-u S defined benefii pension plan assets are held in various trusts and are also invesied in well-diversified portfolios ol emnty fixed income and other securities. Assets ol the Firm s COLi policies, which are used to partially fund tne u S OPLB plan, are held m separate accounts of an insurance rompany and are allocated to investments intended lo replicate eouity and lixed income indices

The investment policy loi lhe Firm's u S defined henelu pension plan assets is lo optimize the risk-return relationship as appropriate to the needs and goals oi the pi an using a global port! alio of various asset classes diversified by market segment, economic sector, and issuei Assets are managed hy a combination of internal and external investment managers Periodically the Mrm performs a comprehensive analysis on the Ll s defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic tost, present value ot contributions and funded status Currently, approved asset allocation ranges are US equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 5%. real estate 0% to 10%. real assets 0% to 10% and private equity 0% to 20% Asset allocations are not managed to a specihc target hul seek to shift asset class allocations within these stated ranges Investment strategies incorporate the economic outlook and the anticipated implications of the macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan ihe Firm

regularly reviews me asset allocation', and asset managers as well as omer factors thai impact the portfolio, which is rebalanced when deemed necessary

For the u K delined benefu pension plans which represent the mos: significant ol the non ll S defined benelit pension plans the assets are invested to maximize returns subject lo an anpiopnaie level ol risk relative io the plans" liabilities To reduce the volatility in returns relative to lhe plans' liability profiles, the U.K defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations Other assets, mainly equity securities, aie then invested tor capital appreciation, to provide long-term investment growth Similar to the u S defined benefit pension plan, asset allocations and asset managers lor the U K plans are reviewed regularly and ihe portfolios are rebalanced when deemed necessary

investments held by the u S and non-U S defined henefil pension and OPEB plans include linanciai instruments that are exposed tn various nsks sue)) as market, credit, liquidity and country nsks Fxposure to a concentration of credit nsk is mitigated by the broad diversification ol both u.S and non-U.S investment instruments Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments As of December 31, 2016. assels held by the Firm's U S and non-U S defined benelit pension and OPEB plans do not include JPUorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPUorgan Chase in the amount of S3 4 billion and $3 2 billion for U.S plans and (1.2 billion and (1.2 billion for non-U 5. plans, as of December 3l, 2016 and 2015. respectively.

Fair value measurement of the plans' assets and liabilities

Foi mlormation on fair value measurements including desci unions nl leve: I ."! ana valuation meinods employer! hy the Firm, see Note 3

Pension and OPEtl plan assets and liabilities measured at fair value

U.S defined benefit ueruori plans

Cash and casn equivalents Inuity securities ConimoiutollecIM trim funds" Limited parinti shins'" Corporate debi securities*' U.S federal, Sia:e loca: and non securities Mortgage backed serin ii h* Derivative t etiwaiii'S

I 7Jl19 1 7.176 i 396 1 10 341

(■■‹'•vatiw payables

Total liabilities measured at fail

U S defined benefit w

Decernl**31.'2015. -, tmmiUioral;.i-fr:-.-'. .. ,. . ' .

Cash and cash equivalents t qu i ty securities CommonAollecIrve trust funds" Limited partnerships*" Corporate debt securities" US. lederal suit

Mortgage backed securities DFrrva:ive Other"

' ' Tarejet AAocaton

■ . Tarret, '.-, Wtocallon

31.*

The following table presents ihe weighted-average assei allocation of ihe fair values of total plan assets at December 3) for the years indicated, as well as the respective approved range/target allocation by assel category, for the Firm's U.S and non-U S defined benefit pension and OPEB plans

30 70% 30-70

Taigef . ' allocation _

Asset category

Debt securities" Eouily securlnn Real estate

0 10

ml. and mortgage backrd securities.

0-3S

(a) r>blseturit'spnrriirilYincludecwiwa*edebt US. federal state.

(bl "lttiiutivesp™narihrircludelimi[rtpirTr»;rsriiris.

(ci Represents the U.S OPCD planpnly. as the U k. OPte plan e> untune

I 7 670 t 1.930 1 S39 1 10 139 '

*

(Jb) l

Total assets measured at fair value*'

Dernaiive payables
Total liabilities measured at (air va

irled a mi of shon term m ms ?rn.173Sm.Hion <http://%e2%96%a0rn.173Sm.Hion> ;nc
and 70IS mpecl'vcli
U) ai December 31, 7016 and 201S. COmmonA.Dlin.livr <http://COmmonA.Dlin.livr> I'uSI hinds pri
investments (Including Index) and real estate funds (b) unfunded conm'tmentt to puichase tunnel partnership invesime r.is for tut ulant ■ (ci Corporate debt securities include debi Hturu.nef U S. and vr. u s.cwpnraiio.-s

ivcsntienii so I Helmed ben
d) Olher connsls pnmarlly of money maikel funds and partu iMlmg and am pailicip¡;i-i¡ an: or ihe lair value hierarchy I'*** they are vtluec uiii« markei observable prices Pandean the fair va'.ue hierarchy due lo a lick of maiket mechanisms fa.- traniIeinrig e arh ooiicv ani
e) Certain Investments ihal are measured at fur value rung tti* nei asset value oer v.vt (ur ihe lair valuenlerarrn. ai December 31.2016 and 2015 ihe lain trust lunds, wart U o billian and f 4 1 sul.cn <http://sul.cn>. respectively ol u S defined benefu per non U S. defined benefit pension plan invest merits.
If) aiOecmber31.20i6andI01S evciuoed U.S dedned benelit pension plan recewac
and 174 mill'*, respectively (|) at December 31. 201 * and 201S. euJuOrd 1203 Million an* 1JM rmUwn. rrweccvi
and fit million and 117 million, lesptcuvely. of alter liabilities (h) There were mo asieti «r liabilities daisilieC as level 3 fnr tiie non U S. defined benefu pension par

The Firm's U.S OPEB plan was partially funded with COLI policies of (2.0 hillion and Jl 9 billion at December 31, 2016 and 201S, which were classilied in level 3 of the valuation hierarchy

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Notes to consolidated financial statements

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Changes in level 3 fair value measurements using significant unobservable inputs

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US. defined benefit pension pUni Cqtnty securitm Corpoiatr debt secvrilvrs iMrtgaie backed securities Other
Total US defined benefii pension plans

Estimated future benefit payments
The following table presents benefit payments expected to be paid, which include the effect of expected future service, tor the years indicated The OPEB medical and lite insurance payments are net of expected retiree contributions

2017 201S 2019 2020 2021
Years 202 2-20J6

Note 10 - Employee stock-based incentives

Employee stock-based awards

In 2016. 2015 and 2014. JPMorgan Chase granted long-term stock-based awards to certain employees under its LTIP, as amended and restated effective May 19. 2015 Under tfie terms of the (.tip, as of Oecember 3 ?, 2016, 78 million shares of common stock were available for issuance through May 2019 The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP. plus prior Tirm plans and ptans assumed as the result of acquisitions, are referred to collectively as the "Ll I Plans," and such plans constitute the Firm's stock-based incentive plans RSUs are awarded at no cost to the recipient upon then grant. Generally, RSUs are granted annually and.vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date In addition. RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-retaied requirements. All RSU awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common slock during the period the RSUs are outstanding and. as such, arc considered participating securities as discussed in Note 24

in January 2016, the Firm's Board of Directors approved the grant of performance share units ("PSUs") to members of the Firm's Operating Committee under the variable compensation program for performance year 2015 PSUs are subject to the Firm's achievement of specified performance criteria over a three-year period the number of awards that vest can range from zero to 150% of the grant amount The awards vest ana are converted into shares of common stock in the quarter after the end of the three-year performance period in addition, dividends are nohonally reinvested in the firm's common stock and will be delivered only in respect of any earned shaies. Once the PSUs have vested, the shares of common stock lhat are delivered, after applicable tax withholding, must he held for an additional two-year period, for a total combined vesting and holding penod of five years from the grant date Under the LTi Plans, stock options and stock appreciation rights ("SARs") have generally bec-n granted with an exercise price equal to the (air value of JPMorgan Chase's common slock on the grant dale. The Firm periodically grants employee stock options to individual employees There were no material grants ol stock options or SARs in 2016, 2015 and 2014 SARs generally expire ten years after the grant date

The Firm separately recognizes compensation expense lor each tranche of each award, nel of estimated forfeitures, as if it were a separate award with its own vesting date Generally, for each tranche granted, compensation expense rs recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period Tor awards wilh full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues Hie estimated value of awards expected to be awarded to employees as ol the grant date without giving consideration to [he impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligib/e during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier ol the employee's full-career eligibility date or the vesting dale of the respective tranche The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is (o issue either new shares ol common stock or treasury shares During 2016. 2015 and 2014, the f irm settled all of us employee stock-based awards by issuing treasury shares In Januaiy 2008. the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm On July 15, 20)4, the Compensation & Management Development Committee and Board of Diredors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable The SARs. which will expire in January 2018, have an exercise price of (39 83 (the price of IPMorgan Chase common stock on the date of grant) The expense related to this award was dependent on changes in lair value of lhe SARs through July 15, 2014 (the date when the vested number of SARs were determined), and the cumulative expense was recognized ratably over the service period, which was initially assumed to be five years but. effective in the first quarter of 2013. was extended to six and one-half years. The Firm lecognized (3 million in compensation expense in 2014 for this award.

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Notes to consolidated financial statements

RSUS PSUs. employee stock options and SARs activity
RSUS/PStIS
Weigh: rd-average

Icmuruf Aggregate

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■ ■ tin years! . 'value

Compensation expense lol RM.'s and fsus is measured bar-^il on tne numbpl ol units granted multiplied hy tne sunk price al the gram date and lor employee stock ootions and SARs is measured at ihe grant dale using the Black-Scholt-* valuation model Compensation expense lor these awards is recognized in nel income as described previously The lollowmg tau'e summaries 'Puorgan Chases RSits f'Sus employee stock options and SARs attivuy lor 2016
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S7 IS 30.267 %

■usable. December 31

The total lair value of RSUS that vested during the years ended December 31. 2016. 2015 and 2011. was JL" 2 billion. $2 El billion and J3.2 billion, respectively lhe total inirmsn vjlue ol nt'lions exercised during ihe years ended tiecemin-r J}. 2016. 20ll and 201 A, was $336 million. 1335 million and $539 million, respectively

Compensation expense

The Firm recognized the lollowmg noncash compensation expense related to its various employee stock-based incentive plans m its Consolidated statements of income
Year ended Oetembrr ll. (mmllkons) .." 2014, ,■■
"/01S
f I.04« {I 1(14° $ I 371
Cos) ol prior grantsof RSUs. PSUs and SARs lhn are amortized over their apphable vesting per tods

Accrual of estimated costs ol stock based awaids to be granted in future periods including those to lull-career elipble employees

At Decembei 31. 2016. approximately $700 million (pretax) of compensation expense related to unvested awards had noi yet been charged to net income That rosi is expected to be amortized into compensation expense over a weighted-average period of l 0 year The Firm does not capitalize any compensation expense related to share-based compensation awards to employees

Cash (lows and tax benefits Effective January l. 2016. lhe Firm aoopted new actountmg guidance related lo employee share-based payments. As a result of the adoption of this new guidance, all excess lax benefits (including tax benefits from dividends or dividend equivalents) on share-based payment awards are recognized wuhin income tax expense in the Consolidated statements of income, in prior years these tax henefils were recorded as increases lo additional paid-in capital income (ax benefits related to stock-based incentive arrangements recognised in the Firm s Consolidated statements of income for the years ended Oecember 31. 2016. 2015 and 2014, were $916 million. 1746 million and $854 million, respectively.

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2014
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The following table sets forth the cash received from the exercise of stock options under all slock-based incentive arrangements, and the actual income tax benefit related to tax deductions hom the exercise of the stock options
v ended Dec ember 31.(in'irilhons) ■'.
rash received for options exercised

Note 11 - Noninterest expense

(317) [1] 1.206

Foi details on nonuueresi expense, see Consot-ciatec statements ot mcome un page 141 included within expense are the following

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Note 12 - Securities

SKunil..'S aie rijlilfied as trading afi or hiu Securities classified as trading assets aie discussed m Nnte 3 Predominantly all of the 'irm s AFS and HIM investment securities (the "investment securities ponlolio") are netd by treasury and CIO m connection with ns asset-liability management obiwives At December 31 2016 ;:ie investment securities portfolio tonsisled of debt securities with an average credit rating ol AA- (based upon external ratings where avaitahte and where not available, based primarily upon internal ratings winch correspond to ratings as defined by S&P and Moody s) AFS securities aie carried at fair value on the Consolidated balance shSPts unrealized gams and losses afler any applicable hedge armuniing adjustments, are reported as nei increases or decreases to AOCI ihe specific identific ation method is used to rieteimine realized gams and losses on Al-S securities, winch are indudtc [1] in securities gains/flosses) on tne ConscilKfJlccJ staifments ol unon-e HTM deoi securities, which management fas the mi cut and abiMv lo hold mini maturity, are earned at amortized cost on the c onsolidateri balance sheets For liotti A '5 and htm debt sr>runties. Purchase discounts or premiums are generally amortized into mieresf income over (fie contrachidl life of the security

During 2016. the Fum iiansferrett commercial MBS and obligations of u S states and municipalities wuh a fair value of $'/ 1 billion t-'cm AFS :o him these securities were trausierred at lair value AOCI included net pretax unrealised gams of $78 million on the securities at the date of transfer lhe transfeis reflect the Finn's intent lo hold the securities to maturity m order lo reduce the impact of price volatility on AOCI This transfer was a non-cash transaction

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

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Prime and Alt-A" SuDprime" non-U.S Commercial

Tout mortgage -badutd securitin H.SS9

U.S Treasury and governmert agencies"' 44 J22

35.864 12.464

35,288 4,958

Obligations of us. states and muiKipalities 30,214

Certificates ol deposit *106*

non-U.S governmem debt securities 34,497

27,401 6,967

31.146 9.125

Corporate debt securities 4,916

Asset-backed securities.

235,39] 5.386 2,067 20

Collateralize loan obligations 27.152

Other 6.9S0

lout available-for-sale debt securities Available lor-si

30.S11 36,771 5.654
29,910 S.781

Total available-for-sale securities Hefd-u-maturity debt securities Mortgage-backed securities

16,165 14,724
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U S. government agencies" [1]

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b) *ra period imour.is hive Men ivvised lo cunlorm Willi tu
c) included total us. gownmert sponsoredenierprue obhgj lespectnehr. which acre mortgage relaled

Securities Impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31.2016 and 2015

', Securities mCTl gots unreal aed losses

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Availabit-for-sale debt securities uortgaee-backed setunlies U.S. rownmer* agenews

11 I 30,362 %

Commercial

33,557 21,543

23.543 7.270

Total morUale-backed securities U.S. Treasury and govemnient agencies Obligations of U.S slates and Certificates of deposit Non-u 5. cmmment debt securtti Corporate debt securities Asset-backed securities.

Collateralized loan otlinjations

Other

5,263 1,992

Total available-fpr-cale debt securities Avail able-lor-sale erjuity securities

3.129 5.163 8.292 4.702

3,129

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Commercial Total mortgage-backed securities

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Notes to consolidated financial statements

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Total mortgage-backed securities

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Other

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U.S govtrnment agencies
Commercial

Total mortgage-backed securities

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Total held to-maturity securitun

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Cioss unrealized losses

The Firm has recognized unrealized losses on securities i; intends io sell as OHi ihe rum does noi intend to sell any of ihe remaining secuimes with an unrealized loss m aoo as ot December 31. 20lb. and il is not likely thai the I irm will be reouired to sen these securities before recovery ol their amortized cost basis Except lor the securities for which credit losses have been recognized in income, ihe Firm oelieves that the securities with an unrealized loss m AOCi are no: other-than-tempoianly impaired as of Decomher 31.2016 Other-than-temporary impairment AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the f irm's ongoing assessment of OTTI For most lypes of del)! securities, the Firm considers a decline in fai: value to he other-than-temporary when the Finn does noi exoect to recover the entire amortized cost basis of the security For beneficial interests in securitizations that aie rated helnw "AA"ai their acquisition, or that can be contractually prepaid or otherwise sell led in sin h a way that the Firm would not recover substantially al! ol its recorded investment, the Firm considers an impairment to hi- other-than-temporary when there is an adverse change in expected cash flows For AFS ecjuity securities, the Fum considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not reenvpr its cost hasts

Potential OTTI is considered using a variety ot factors, including the length of time and extent lo which the market value has been less than cost; adverse conditions specifically relaled to the induslry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of Ihe security, changes to the rating of the security by a rating agency. Ihe volatility ol the fair value changes, and (he Firm's intent and ability to hold the security until recovery

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis in these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the (air value of the securities For debt securities in an unrealized loss position that the Firm has the intent and ability to hold, the expected cash flows io be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income Amounts relating to factors other than credit losses are recorded in OCI

iht rum s cash Host evaluations take miio account the fanes iKiied above and e>:iec;.i:ioiis of U'levant nuikei and economic data as ol tne em! ol the rejidMnig period For securities, issued m a securitization ih« Firm estimates casli Hows consiliums uncetlvmg ban-level data and structural featuies of tne sircunnzaiion such as subordination e>cess sr>re.td overcnllateralization oi other forms ol credit ennanremeiu. and compares the losses protected for the underlying collateral ("pool losses") agamsi the level ol credit enhancement in the securitization structure to determine whether Ihese features are sufficient in absorb the imol losses, or whether a c rcdit loss exists Ihe Firm also performs other analyses to support us cash Now projections sucn as first-loss analyses or stress scenarios

For enuitv sec unties oni losses are reccif.nized m trainings if the firm intends lo sell the security in other cases the Firm considers the relevant factors noied above, as well as the Firm's intent and ability to retain us .nvestment for a period of tune sufficieni to allow fnr iiuy anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than Ihe cost basis Any impairment loss on an equity security is equal to the fult diHerence between the i ost basis and the tan value ol ihe security

Securities gains and losses

Ihe folluwing table presents realized gams and losses and 01 Tl from afs securities lhat were recognized in income

teal ended Dm™ tier 31, i ■ ' fm mJhcrrSl - -	-2016:'	Z01S. '	1 7014
Deal i;ed gains	1 401	1 3M	i 314

Hrt securities gams

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Changes in the credit loss component of credit-impaired debt securities

Ihe cumulative credit loss component, including any changes therein, of OTTI losses that have been recognized in income related to AFS debt securities was not mater lal as of and during Ihe years ended December 31. 2016. 2015 and 2014.

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Notes to consolidated financial statements

Contractual maturities and yields

The following tahle presents the amortized cost and estimated fair value at December 31, 2016, of ll investment securities portfolio by contractual maturity

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2 71% 1 63% 1 7«%

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1 27% 10 214

1 27% 10.214

'4.410 t rs 32S 3 24%

28,302 t 29 542 6 63%

121 t 123 3 52%

12.307 1 1Z.34S 2 21%

216 430 2 85%

735.416 217.965 2 86%

111.449 1 IZ0 41* 1 19%

vrtvnr applicable. The cflectin yield rcivdei unscheduled iii n rnauirlbet ai cerim teryiliinn*r bt prepaid (c) infrde*MCumk(withi*iwe«m)/'niT Snenintialiv ill nl nir iirim (arXraciuil maturttr The esuma:rd vancMcd tirup Ht. n!«h rtllec: lor aftnci residential Ulatcralnd mort(at» b*cJlom and liver vri

Note 13 - Securities financing activities JPUorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, 'securities financing agreements') primarily to finance Ihe Firm's inveniory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Resale and repurchase agreements are generally earned at the amounts at which the securities will he subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally earned at the amount of cash collateral advanced or received Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a nel basis For further discussion of (he offsetting of assets and liabilities, see Note 1. Fees received and paid in connection with securities financing agreements are recorded in interest income and mlerest expense on Ihe Consolidated statements of income

The Firm has elected the fair value option Foi certain securities financing agreements For further information regarding the fair value option, sec Note 4 The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets Generally, for agreements earned at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue However, for financial instruments containing embedded derivatives that would be separately accounted for m accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue

Securities financing transactions expose the Tirm to credit and liquidity nsk To manage these risks, the Firm monitors the value ot the underlying securities (predominantly high-quality securities collateral, including government-issued debt and agency UBS) that it has received from or provided to us counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate Uargm levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monuoi ed on an ongoing basis

In resale agreements and securities borrowed transactions, the Tirm is exposed to credit risk to Ihe extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged in repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value o! the initial cash principal advanced, and any collateral amounts exchanged

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged . in the event of a counterparty default, it is also the Finn's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30

As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment wuh respect to these agreements as of December 31, 2016and 2015

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Notes to consolidated financial statements

Amounts netted

The table below summarizes the ijioss and nel amounts ol ihe firms securities fmannng agreements as ol Decemiici 3; 20 lo and JOI S wnen [tie rum has obtained an appropriate legal opinion wuh respect 10 the master netting agreement with a counterouitv and where o;her relevant netting criteria under u S GAAP are met tne Fum nets, on tiie Consolidated balance sneels. the balances outstanding undei us securities financing agreements with the same counterparty in addition, the Fum exchanges securities and/or rash collateral with its ccwn:eiparties th-s collateral also reduces, m ihe Firm's view, the economic e>.posuie with the niuntorparty Such cniiaii-rai. alorg w :h securities l.nancing ba'anies mat do not meet alt these relevant netting criteria uiidw (J S GAAP, is presented a-. "Amounts not netta.iie cm the Consolidated .lalarice sheets." and reduces (he 'Net amounts" piesented below it me Fum lias an appropriate legal opinion with respect to the master netting agreement with the counterparty Where a legal opinion has not been either sought or obtained the securities financing balances are presented gross m the "Net amounts" below, and related collateral does not reduce Ihe amounts presented

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rhe tables Oniuw present as ol Oecember 3 [.'Olu and ,'015 the tvoes of financial as' agreements and (he remaining coniranual matu-'ity of me securities 1 mating rfgreeni

Decemhei]| (in millions)
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(133.3001 1 (72,177)

2016 (ui millions) v.-'
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1'- "" • on the ■ : .. presented on the
■■"... ,. (omolidated, Consulidjled

Gross amounts balance sheets ■ balance sheets'*

', ■ Amounts not -' nenabkt on the ' Consolidated balance sheets'

Senium purcnaseti urmei resale agreements Securities tnrTcwed

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98 721 - 98 721 (65.0SU 33.640

Total securities sold under lepurcliase agreements Total securities loaned and other 1*

Il« 5<>5 1 8.120

290 044 il 556

Secuiitm sold undei reptii chase agreements Securities loaned and other"

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22 556

)56 2S*>(133 786 1 (1)9 3321 * 14.4S4 1

22.556 (22,745))11

a) Includessecurities-lce-securiiieslervJirvitiansaciensof *o 1 billion and 14 * When at Decembei 31 2016 and 7015 respectneHy. accounted (or al lair value atiere the firm a acimgas lender 7hese imnunH arepresenled ■itrrm other liabilities m ITir Consolidated balance shews.
b) includes securing financing agree men: s accounted tor at lau value, ai Dncember 11.2016 and 2015, included secur lues purchased under ifjle agreemenis of (21 5 billion and 123 1 billion, respectively, and securities sold under agreements lo repurchase of (687 million and *1 5 billion. iespeclrvc-lv There were no secun;«ts borrowed al beceinlier 31. 201 o and (195 million at December 31. 2015 There nvere no secunties loaned accounted lor ai tan value m cither period
ic) In some lasi-t colli (era I en hailed with a niunterca.'ly exceeds the nel asset nr l.arjlity balanrevnth that countti party in such MSrs. the amounts r eported in this column are limited 10 the related asset oi liability win that counterparty
til includes lecuMex financing agrremerKi :har provide rollaif.-al right i. bul where an J{>(yt>r>.-ijlp lrfJl otrmon wi'.hrrvtct to tlx nuaer neting agreemetf has not been filher sought nr obtained ai December 31.2016 and 2015 included * A billion and *7 3 billion, respectively of securities purchased under resale apeements, (27 1 billionand 131 3 billion, respectively of securities borrowed. (15 9 billion and (l 2 6 Mhon. respectively o' securities sold undei agreements lo repurchase- and loo million and (45 million, respecirvrly. of secunties loaned and other
(e) Pilor petnd amounishaw been revised to conform with th* current presentation

Transfers not qualifying for sale accounting

At December 31.2016 and 2015. (he Firm field 13 9 billion and if 5 NHion, lesirecuvefy. of financial assets tot which the rights have been transferred to third parties, however, [he translcrs did not qualify as a sale in accordance with U.S GAAP These transfers have been recognized as collateralized hnancing transactions ihe transferled assets are recorded m trading assets and loans, and the corresponding liabilities are recorded predominantly in other borrowed funds on the Consolidated balance sheets.

Notes to consolidated financial statements

Note 14 - Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition The Firm accounts for loans based on the following categories. ■ Originated or purchased loans held-for-investment (1 e.. "retained"), other than PCi loans

- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories.

Loans heftf-for-mvestmcnf (other than PCI toans) Originated or purchased loans held-for-investment, other than PCt loans, are recorded at the principal amount outstanding, net of the lollowmg charge-offs. interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums, and net deferred loan fees or costs Credit card loans also include billed finance charges and fees nel of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-lor-mvestment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net dclcrred loan lees or Costs, are amortized into interest income over the contractual life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual ol interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U S. government Agencies) are placed on nonaccrual status and considered nonperforming when lull payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection A loan is determined to be past fJue when the minimum payment is not received bom the borrower by the contractually specified due date or for certain loans (e g.. residential real estate loans), when a monthly payment is due and unpaid foi 30 days or more Finally, collateral-dependent loans are typically maintained on nonaccrual status

On rhe dare a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income In addition, (he amortization of deferred amounts is suspended Interest income on nonaccrual loans mav be recognized as cash interest payments are received (1 e., on a cash basis) if the recorded loan balance is deemed fully collectible, however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts aie applied to reduce the

carrying value of the loan (the cost recovery method) For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged olf or paid in full However, the Firm separately establishes an allowance, which ts offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income on credit card loans. The allowance is established with a change to interest income and is reported as an offset to loans

Allowance for ban tosses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date and is recognized on the balance sheet as a contra asset, which brings the recorded investment to the net carrying value Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. See Note 15 for further information on [he rirm's accounting policies for the allowance tor loan losses

Cfiartje-offs

Consumer loans, other than risk-rated business banking, nsk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (1 e., (air value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the FFIEC Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off no later than 180 days past due. Auto, student and modified credit card loans are chaigcd off no later than 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified m a 1DR if the loan 15 determined to be collateral-dependent
- Loans to borrowers who have experienced an event (e.g.. bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards Residential real estate and auto loans are charged of I when the loan becomes 60 days past due. or sooner if the loan is determined to be collateral-dependent. Credit card, student and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event.
- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and nsk-rated aulo loans are charged on when il is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether (0 recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations ol lhe workout/restructuring of the loan and valuation ol the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, (he determination of the fair value ol the collateral depends on the type ol collateral te.g. securities, real estate) In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market pi ices or broker quotes. For illiquid securities or other financial assets, the fair value ot the collateral 15 estimated using a discounted cash flow model

For residential real estate loans, collateral values aie based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay. the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter As soon as practicable after the Firm receives the property in satisfaction of a debt (e g. by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure Transaction with (he borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals") Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specilic factors For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies The Firm also considers both borrower- and market-specific factors, which may result m obtaining appraisal updates or broker price opinions al more frequent intervals.

Loansjwltl:tor-sale

Held-for-sale loans are measured at the lower ot cost or fair value, with valuation changes recorded in noninterest revenue For consumer loans, the valuation is performed on a portfolio basis For wholesale loans, the valuation is performed on an individual loan basis

interest income on loans held-for-sale is accrued and recognized based on (he tomractual rate ot interest

Loan origination tees ur costs and purchase price discounts or premiums aie deterred in a contra loan account until the related loan is sold The dclerrcd fees and discounts or premiums are an adjustment to (he basis of the loan and therefore are included in [he periodic determination of [he lower of cost or fair value adjustments and/or the gam or loss recognized at the time of sale

Held-for-sale loans are subject to the nonaccrual policies described above

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans

1 pans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue

Interest income on loans is accrued and recognized based on the contractual rate of interest Changes in lair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue Loan origination costs are recognized in the associated expanse category as incurred

Because these loans arc recognized at fair value, the Firm's allowance for loan losses and charge-oil policies do not apply to these loans

Sec Note 4 for further information on the Firm's elections or

fair value accounting under the fair value option See note 3

and Note 4 for further information on loans earned at fair

value and classified as Hading assets.

PCI loans . -

PCt loans heid-for-mvestmenl are initially measured at fair value PCI loans have evidence of credit deterioration smce Ihe loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected Because PCi loans are initially measured at fair value, wtuch includes an estimate of future credit losses, no allowance for loan losses related lo PCI loans is recorded at (he acquisition date. See page 219 ol this Note for information on accounting for PCi loans subseoucnl 10 their acquisition

loan classification changes

loans 1:1 the held loi-nvesinnjn; portfolio mat management decides to sell are iranslened tn the held-for-sale uoittolm at ihe lower of cost or fair value on the date ot transfei Credit-related losses are cha'r,efl agamst the allowance for loan losses, non-credit related losses such as those due to t hanges in interest rates or foreign ruricncy exchange raies jre recognized m nonmieresi revenue

<n the event that management decides to retain a loan m the held-for-sale ponlolio. the loan is transferred to ihe held-for-inveslment portfolio ai ihe lower ol cost or fat: value on the date of transfer These loans are subsequently assessed lor impairment based on the Fum s allowance methodology For a further discussion of the methodologies used in establishing the Firm's allowance tor loan losses, see Note 1S

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities Through the modification, JPUorgan Chase grants one or more concessions lo a borrowe■ who is experiencing financial difficulty in oroei to minimize the Firm's economic loss, avoid foicclosure or repossession of the collateral, and to ultimately maximize payments received by the Tirm from the borrower The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, pnncipai forgiveness, or the acceptance of eoiuly or other assets in lieu of payments

Such modifications are accounted lor and repotted as TDRs A loan that has been modified in a TOR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless ol whether the borrower performs under the modified terms in certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring in such circumstances, and assuming that ihe loan subsequently performs under its modified terms and the Firm expects to colled all contractual principal and interest cash Hows, the loan is disclosed as impaired and as a TDR only during the year of the modification, in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured

I cians creep! cretin card loam modifier! m .1 ion aif generally placed on nonaccrual status, altbuugh in many cases such loans were already on nun,iterual status prior to modification These loans may be returned io performing status (ihe accrual of mteiest is resumed) d the lollowmg criteria are met 0) (he borrower has perlormed under ihe modified terms lor 3 minimum of six mo ml is and/or sn payments and (n) tne Turn has an expectation that repayment of the modified loan is reasonably assured based on. lor example the borrower's debt capacity and level of future earnings collateral values, LTV ratios, and other current market considerations in certain limited and well-delmed circumstanres m which the loan is runent at the modification date, such loans are no: placed on nonaccrual status at the time of modilication

Because loans modified in l DRs arc considered to be impaired, these loans are measured lor impairment using the Firm's established assei-specific allowance methodology, which considers the expected re-default rates tor the modified loans A loan modified in a TDR generally remains suhject to the asset-specihc allowance methodology throughout its remaining life, regardless of whether Ihe loan is performing and has been returned to accrual slants and/01 the loan has been removed from the impaued loans disclosures (1 c . loans restructured at market rates) For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 1 b

Foreclosed property

The Finn acquires property Irom borrowers through loan restructurings, workouts, and foreclosures Pioperty acquired may include real property (e.g , residential real estate, land, and buildings) and commercial and personal property (e g., automobiles, aircraft, railcars, and ships)

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e g, by taking legal title or physical possession) For loans collateralized by real properly, Ihe Firm generally recognizes the asset received al foreclosure sale or upon the execution of a deed in lieu ol foreclosure transaction with (he borrower Foreclosed assels are reported in other assets on the Consolidated balance sheels and initially recognized at fair value less costs to sell Each quarter ihe fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value Subsequent adjustments to fair value are charged/credited to noninterest revenue Operating expense, such as real estate taxes and maintenance, are charged to other expense

loan portfolio

Ihe firm's loan portfolio is divider, into thr?e pontc^o segmenis whim ai-.> ihe same segments used bv me h.-m to i1-.';e:mine the allowance loi loin losses Consumer eicludmg credit cam Credit card, ano wti-jiesa'e wuinn eacn portloho segmen: tne Firm monitors and assesses the credit risk m me following classes of loans, based on ;tie nsk characterises ol earl' loan class

• Commercial and industrial ■ Real estate
• Financial institutions
• Gown 11;lent agencies

Consumer, excluding ■ credil card[1*]

- Cied-1 ca'd u>ans

Residential real estate - C'Clm ■Tiome equity[5r1]
• Residential mortgage*-' Other consume! loans.
•Auto[1*]
- Business banking[***1]
* Student and nlhei

EesitJcnt'dUeaLesiaie - pcj
• Home equity
• Prime mortgage
• Subpnme mortgage
• *Option ARMS*

a) Includes loans hold in CCB prime morliMSP and home fdun* loins held ir. awv and prime moitgaRf loans neld mCoipc
b) includes senior and lumcx lien home equity loans
Ic) includes prime (including omen ARUs) and subon'" loans
(d) includes certain Business banking and auto dealer risk rated loans that apivv it* >rioles>iie metriooioicv tor nenymimri these loans are nuraged bv CCB and therefore, lr* consistency in presentation ire included with tin' otner con'.nmer lc (ej Piedormiunft iivrhidm Biwiwss turning bur-, as wrtl as depcr-jir ovcroYdfis
f) Includes toans held m CiB CB. AWM and Corpora:? E icludes prime mortgage a'idl«.iriie equity Hians h'-icm AWMand pr Corporate Classes are internally defined and may nut al.K.-i mt:i ivguiatory deh:uti:>ns
g) includes loans lo individuals. Sl'hs. hoi imf con names, and pnvaifrfOucatmr and civic organiiamni iw mnre ir.'nima Hole 16

The lollowmg tables summarize the Firm's loan balances bv pur tfo'.io segment

■ 89.907 [1] 2,628 2.230

(in millixis)	Consumi-r. excluding riednraid	Credil catd'" i
Retained Held tor-sale Ai fair valve		
Retained fleid for-ule At (air value		
Oecemrxf 31.20IS ■		
	f)2 792 ' 1.646	

> tor umuflectiale mterrsi and fees
[1] lair value 0.11 mi lus been elected) are presetted nr-t ol unearned income unamortized discounts and ints n*reni«ifu:ena)aspl Oecember 31. 2016 and 2015

The following tables provide information about Ihe carrying value of retained loans purchased, sold and reclassified to held-lor-sale during the periods indicated These tables exclude loans recorded al lair value The Firm manages its exposure 10 credit risk on an ongoing basis. Selling loans is one way that Ihe Firm reduces Us credit exposures

1.448 8,739
Z.381
S.se.4 15,107 2,202

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Sales
Retained loans reclassified to held-for-sale
5 279 5 099 1 514
7 433 14.287 2.235

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tin irflleacrJlffi-r'.^ i.'tyWw
Purchases Sales
Retained loans reclassified to held for-sale

Year ended Oecember j i;' j.; "l".",T-7^-¡\^ (11 irdhomJ^C'Xi^'.v-II'i^V..*,*^^!
3.039
581
Purchases Sales
Retained loans reclassified to held lor-saie
1,190

(a) Purchases predominantly represent the rum's voluntary repurchase ol certain delinquent Suans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines. The r 11m typically elects to repurchase these deitncueii loans as il continues to serwee them and/or manage ihe foreclosure process in accordance with applicable requirements of Ginnie uae. FHA, (tits, and Air VA.
tbl deludes purchases of retained loans sourced through the correspondent origination channel and under will en in accordance with the Firms standards. Suc!i purchases were $30 4 billion ISO 1 hillinnand IIS I bitlior.for the years ended December ll. 2016, 2015 and 2014, respeciively

The following table provides information about gams and losses, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 1K (in tratGons)'.
Met gains/l lotiei) on tales of loans (Including love Consumer, eicluding credit card Credit card

Total net gains on sales of loans (including lower ol cost or lair vi (a) Excludes sales related to loans accounted for at fair value

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines ot credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior Itens, prune mortgage loans with an interest-only payment period, and certain payment-option loans that may result in negative amortization

The table below provides information ahnut retained consumer loans, excluding credit card, by class.

iDeaf^M:tin*r»!icai^ --' .^\VrKlt'^'-ZlliS;

S 39.061 S 4S.5S9 192,163 166.239

65.814 22.698 1,989
60.2SS 21.208 10.096
Residential real estate - excluding PCi Home equity Residential mortgage Other consumer loans Auto
8 893
1.263 11,851
Business banking Studen and other Residential real estate - PCI Home equity Prune mortgage Subprime mortcage Option ARUl
Total retained loans
2.941 11.234
S 164.406 t 144.155

Delinquency rates are a primary credit quality indicator for consumer loans. Loans thai are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans thai will ultimately result in a foreclosure or similar liquidation transaction in addition to delinquency rales, other credil quality indicators tor consumer loans vary based on the class of loan, as follows

- For residential real estaie loans, including both non-PCI and PCi portfolios, the current estimated Uv ratio, or the combined LTV ratio in the casp of junior hen loans, is an indicator of the potential loss seventy m the event of delault. Additionally. LTV or combined I TV ratios can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral The geographic distribution ol

  the loan collateral also provides insight as to (he credit quality of the portfolio, as factors such as ihe regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed* FICO score is a secondary credit-quality indicator for certain loans, as HCO scores are an indication of the borrower's credit payment history Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into ihe portfolio performance based on regional economic activity and events
- Risk-rated business banking and auto loans arc similar to wholesale loans in that the primary credit quality indicators aie (he risk rating (hat is assigned to the loan arid whether the loans are considered to be criticized and/or nonaccrual Risk ratings are reviewed on a regular and ongoing hasis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For lurther information about nsk-rated wholesale loan credil quality indicators, see pages 224-225 of this Note

Residential real estate - excluding PCI loans The following table provides information by class for residential real estate - excluding retained PCI loans in the consumer, excluding credit card, portfolio segment. The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate - excluding PCI loans portfolio 0) junior hen home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates (or this product class, and (ii) the lengthening of loss-mmgation timelines may result m higher delinquency rates for loans earned at the net realizable value of the collateral that remain on the Finn's Consolidated balance sheets

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Notes to consolidated financial statements

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evidential ieal estate impaired loans.' ■ri n a TOR All impaired loans are eva!

HCLOCs bevond the revolving period and HTloans have higher nelinnuency rates than HELOCs within the revolving period That is primarily because (he fuliv amortizing navment lhat is generally rertiureil lor those products is higher than the minimum payment options available for HFLOCs within the revolving peiiuc The Higher delinquency rales nssociaied with amoniiiiig HELOCs and HELOANs are (adored into the ʳirm's allowance for loan losses

Impaired loans

HeS«JM*Ml mo<1 [it* ¹

The table below sets forth mlormation about the Firm's are considered to be impaired as inev have open mod.n allowance as described in Note 1 b

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l 7.644 1 B945 $ 19.7IS 1 J
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7.512

1. Z2S Z.111
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I 67,479 I lt 201

12.942
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LlSf
6.104 5.14* 17>S7
6.216 S627 5,799 S 291 57 694

AllowaKe tor loan losses related lo Im U*p*id principal balance ot Impaired k lmoamd loans on nonaccrual sinus* 1

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JPUorgjnCh*se 4 Co^2016 Annual Report

Notes to consolidated financial statements

yearl
The following table presents average impaired loans and the related interest income reported by the Firm

bans one cash basis** *'

\ 1.111 $ 2,169 $ 2 415 % (25 \ 171 1 117 $ 10 S BS I

4.376 7.697 10.174 105 34B 444 77 17

476 $ 511 $ 1*7 $ 172 $ 195

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Loan modifications

Modifications ol residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCi loans, have been modified in TDRs.

The fdtrowmg table presents new TORs reported by the Firm.

W*l .ended r.lecember 3
tLi'-'i'X'.imi.'^ JOIST.'-
315 i 401 $ 121
Residential mortpeg

Financial effects of modifications and redefaults

The following table provides mlormation about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under ihe loss mitigation programs described above and about redefaults of certain loans modified in tdrs for the periods presented Because the specific types and amounis of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following table presents only the financial effects of permanent modifications This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt

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Nature and extent of modifications

The U S Treasury's Making Home Affordable programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term oi payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs described above during the periods presented This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

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Number ot loans permanently modified

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principal ana/or interrv delcrred
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Other*

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Al December 31, 2016. (he weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were V years (ur home equity and 10 years for residential mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i e.. foreclosures and other forced liquidations;

twos presf-nled andforvtacn I lh* reporiini period ln */t«il I I'Klual Ptymtnis pasl dut ln t

Active and suspended foreclosure

Al December 31, 2016 and 2015, the Firm had non-PCI

At December 31, 2016 and 2015, the Firm had non-PCI residential real estate loans, excluding those insured by u S government agencies, with a carrying value of 1932 million and (1 2 billion, respectively, that were not included in REO, but were in ihe process of active or suspended foreclosure

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JPUorgan Chase ■ 0)72016 Annual Report

Notes io consolidated financial statements

msumer retained loan cesses including auto business banking and siuocui

Other consumer loans

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Other consumer impaired loans and loan modifications

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the following table sets forth information about (he Firm's other consumer impaired loans, including nsk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified m TORS.

Total impair edloanV"

Allowance for loan losses related to impaired lo

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impaired loans on nonaccrual status

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jPuolian Chase ft Col2Cilt> Annual Report

loan modifications

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Certain oilier consumer loan modification-, are cci'ls-Hi-'efl to lie tors as ihev provide vanous concessions :o borrowers who aie dpe'ienting financial d.iiiculiv am ol these TDRs are repoi ted as impared loans m tm- table above Ihe following table oruvides inltitm.inon about (Me Finn's oiner consumer loans modilied in 1D3S New IDHs were not material for the veals ended December 3] 2010 and 2015

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Purchased credit-impaired loans PCI loans are initially recorded at fan value at acquisition PCi loans acquired in the same liscal quarter may be aggregated into one or moie pools, provided that the loans have common risk characteristics a poof is then accounted for as a single asset with a single composite interest rite and an aggregate expectation of cash flows With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected tu be collected over the remaining hie of each pool These estimates incorporate assumptions regarding delault rates, loss severities, the amounts and timing of prepayments and other (actors that reflect then-current market conditions Probable decreases in expected cash flows (■ e.. increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related forgone interest cash flows, discounted at the pool s effective interest rate, impairments are recognized through the provision (or credit losses and an mctease in the allowance for loan losses. Probable and significant increases m expected cash flows (e g. decreased credit losses, the net benefit of modifications) would lirst reverse any prewousfy recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans The impacts of 0) prepayments, (n) changes in variable interest rates, and (m) any other changes in the timing of expected cash Hows are recognized prospectively as adiusiments to interest income The Firm continues to modify certain pci loans The impact of these modifications is incorporated into the rirm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans in evaluating the effeel of modifications on expected cash flows, the Firm incorporates ihe effect of any forgone interest and also considers the potential for redefault The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses in developing these probabilities of default, the Firm

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consmers itu- ri.'lat-unship St-tweei-. the emtiu Ouahtv cb.i:act-.*r -s;ics ci the- un-leMvmg •runs and certain assumptions about nuni'- pi ices and unemployment based upon inojstry wide data the Firm also considers us own historical loss e«perunci [1] to-daie based on actual redefaulted modified PCi loans The dcess o! tash Hows ejected to be collected over the carrying value of ;iio underlying loans is referred io as the accretable vioid in-s amount is no; renoried on the rirm's Consolidated oalance sheets but is accreted into interest mcome al a lewl rate of return ovei the remaining estimated l-ves of the underlying pools of loans it the liming and/or amounts of expected cash flows on PCI loan pools were determined not io be reasonably estimable, no interest would be aencted and the loan pools would be reported as nonaccrual loans, however, since the timing and amounts ol expected cash flows lor the F irm's PCi consumer loan pools are reasonably estimable interest is being accreted and the loan pools arc being reported as performing loans

Ihe liquidation of PO loans which may include sales of loans, receipt ol payment in full Irom the borrower, oi foreclosure, results in removal of the loans from the underlying PCI pool When the amount of the liquidation proceeds (e g cash, real estaie) il any, is less ihan the unpaid in mcipaf balance of (he loan, die difference is first applied against the PCi pool s nonaccretable difference for principal losses o c . the lifetime credit locs estimate established as a purchase accounting adiustmpnt at the acquisition date) When (he nonaccretable difference for a particular loan pool has heen fully depleted, any excess ol the unpaid principal balance of ihe loan over the liquidation proceeds is written off agamst the PCi pool's allowance for loan losses Beginning in 2011, write offs ol PCI loans also include other adjustments, primarily related to interest forgiveness modifications Because the Firm s PCi loans are accounted tor at a pool level, the Firm does not recognize charge-offs of PCi loans when they reach specified stages ol delinquency d e . unlike non-PCi consumer loans, these loans aie not charged olf based on FFIEC standards) The PCi portfolio affects the rirm's results of operations primarily through (l) contribution lo net interest margin, (n) expense related to defaults and servicing resulting from (he liquidation of the loans, and (m) any provision for loan losses ihe PCi loans acquired m the Washington Mutual transaction were funded based on the interest rate charan ensues ol ihe loans Foi example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with (ixed-rate liabilities with a similar maturity motile A net spread will be earned on the declining balance ol the portfolio, which is estimated as of Decembei 31. 2016, to have a remaining weighted-average lile of 8 years

Notes to consolidated financial statements

Residential real estate - PCI loans
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The table below sets lorth information about the Firm's consumer, excluding credit card, PCI loans

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1411% 422% 10.11% 1119* 14.*7«t
■ principal ka

Approximately 24% of the PCi home equity portfolio are senior hen loans, the remaining balance are junior lien HELOANs or HELOCs. The following table sets forth delinquency statistics foi PCi junior lien home equity loans and lines of credit based on the unpaid principal balance asof December 31, 20J6 and 201S

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1 7J*t |V.JOS I 4.]** 1 9,172 1 *** t 1.001

The table below sets forth the accretable yield activity for the rirm's PCi consumer loans tor the years ended December 31, 2016, 2015 and 2014, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCi loan portfolios The table excludes the cost to fund the PCi portfolios, and therefore the accretable yield does not represent nel interest income expected to be earned on iheso portfolios
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13 491 4.20%
Accretion into interest income Changes in interest rates on variable-rate loans Other changes in expected cash flows" Declassification from nonaccretable difference 11•
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Balance at December 31
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Active and suspended foreclosure

At December 3t. 2016 and .7015, the Firm had PCi residential real estate loans with an unpaid principal balance of $1 7 billion and J2 3 billion, respectively, that were not included m REO, but were in (he Process of active or suspended foreclosure

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Notes to consolidated financial statements

Credit card loan portfolio

me cretin t ard portfolio segment includes credit cirri fuJiS originated and purchased by ihe! irm lieluiouencv rates aie the primary credit quality indicator lor credit card loans as they provide an early warning that honowers may be experiencing difficulties (30 davs past due), information on (bo'.e borrowers that have been delinquent tor a longer period of time (90 days past due) is also considered in addition to delinquency rates, ihe geographic distribution of the loans provides insight as to the credit quality ot the portfolio based on the regional economy While lhe borrower's credit score is another general •ndicatoi ol credit quality the nrm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends lo be a lagging indicator However, the distribution ol such scores provides a general indicator ol cred-t quality trends wiiiun the portloho Relreshed FICO score information, which is obtained at least cuaitcrly, for a statistically significant random sample of tne credit card portfolio is indicated in the lollowmg table. FiCo is considered lo be the industry benchmark for credit scores

The Firm generally originates new card accounts to pnme consumer borrowers However, certain cardholders' FtCO scores may decrease over time, depending on the perlormance of ihe caidholder and changes in credit score technology

The table below sots forth m.'ri'maiiun annul tne f i.-m s credit card loans

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Credit caid unpaired loans and loan modifications ihe table below sets foith inlomiaiion about ihe - inns impaired credit tai a leans AH of these loans arc considered to be impaired as they have been modiii'.Ml m TDRs

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The following table presents average balances ol impaired credit card loans and interest income recognized on inose loans.

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Loan modifications

JPUorgan Chase may oflei one of a number ol loan modification programs to credit card borrowers who are experiencing financial difliculty Most ol the credit caid loans have been modified under long-term programs for borrowers who arc experiencing financial difficulties Modifications under long-term programs involve placing the customer on a fixed payment plan, genet ally lor 60 months The Tirm may also ofler short-term programs (or borrowers who may be in need of temporary relief, however, none are currently being offered. Modifications under all snort- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be IDRs.

It the C:irflii(>kl>_-i clnes not rtirr.piv wiiu the rnumbs-d jijyment terms inen the crech: care loan agreement reverts hack to r;s tire modification payment terms Assuming that the caidtioioer does not begin to nerloim in accordance with those payment terms, the loan rommues to age and will ultimately be cnaiged-ofl m arccndance with the firm's standard charge off pohev in addition, il a bnrrowei surrpsslulii' completes a slwi-temi modification pronrjm then ;tie loan reverts back to us ore-modification payment terms However m most cases. :ne nrm does not leinstate the borrower s line ol credit

New en'Oltruents in these loan modifiraiion programs for the years ended t>ect;u;bei 31, 2016. 201 fj and i'OK. were S636 million 1638 million and $807 million respectively

Financial effects of modifications and redefaults i be following tahie provides mlormation about the financial effects of the concessions granted on credit rard loans modified in TDRs and (edefaults tor (tie periods presented

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For credit caid loans modi lied in TDRs, payment default is deemed to have occurred when the loans become two payments" past due A substantial portion of these loans is expected lo be charged-oll in accordance with the Firm's standard charge-off policy Based on historical experience, the estimated weighted-average default rate for modified credit card loans was expected lo be 28 8/%, 2S 61% and 27 91% asof Decembei 31, 2016. 2015and 2014. respectively

Wholesale loan portfolio

wholesale loans include loans made to a variety ol customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned to each loan Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio Risk ratings on loans consider the PD and the LGD The PD is the likelihood that a loan will default The LCD is the estimated loss on the loan that would be realized upon the default of the borrower and takers into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level ol the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and (he industry and geography in which the obligor operates The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist ol special mention, substandard and doubtful categories Risk ratings generally represent ratings profiles similar to those defined by SAP and Moody's investment-grade ratings range from "AAA/Aaa" lo 'BBB-/Baa3." Noninvestmeni-grade ratings are classified as noncriticized ("BB*/Bal and B-/B3") and criticized ("CCC*/'Caal and below"), and the criticized portion is further subdivided into performing and noriaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans

Risk ratings are reviewed on a regular and ongoing basis by Credil Risk Management and are adjusted as necessary lor updated information affecting ihe obligor's ability to fulfill its obligations.

As noted above, the nsk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on ihe management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note S for further detail on industry concentrations.

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The lollowmg table presents additional information on [he real estate claw ol loan*, within [he Wholesale ponloho lor the periods indicated Exposure consists primarily of seemed commercial loans of winch mult if.irmly is the largest segment Uuiiitamilv lending finances acquisition, leasing and construction of aiiartmenl buildings and includes exposure 10 real estate investment trusts earns") Other commercial lending largely includes financing lor acquisition, leasing and construction largely for of lice, retail and iiicliisinal real estate, and includes exposure to REITs included in real estate loans is J9 I Pillion and (7 3 billion as of Decembei 31. ."016 and ^Oi 5 lespectively ol construction and development exposure consisting of toans originally purposed for construction and development, general purpose loans lor builders, as well as loans lot land subdivision and pre-devolopment

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Wholesale inipaired loans and loan modifications

Wholesale impaired loans consist of loans that have been placed on nonaccrual status and/or that have been modified m a TDR All impaired loans aie evaluated lor an asset-specific allowance as described in Note 15 The tahle below sets forth information about the hrm's wholesale impaired loans.

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The following (able presents the Firm's average impaired loans for Ihe years ended 2016, 2015 and 201*

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Note 15 - Allowance tor credit losses

JPMorgan Chases allowance lor loan losses rovers Hie consumer including credit card, portfolio segments (primarily scored) and wholesale (nsil-rated) portfolio and represents management s esiimj;e of provable credit tosses inherent m the Firm's retained man portfolio ihe allowance tor loan losses includes a formula-based component an asset-specific component and a component related to PCi loans, as described below Management also estimates an allowance for wholesale artd certain consumer Jeuding-related commitments using methodologies similar io those used to estimate the allowance on the underlying loans During ?016. tne I irm did not make any significant changes to the methodologies or policies used to determine its allowance for crecfrt losses, such policies are described m the following paragraphs

Determining the appropriateness of the allowance is complex and requires judgment by management abou; me effect of matters that are inherently uncertain Subsequent evaluations of Ihe loan portfolio, in light nf the factors then prevailing, may result m significant changes in the allowances for loan losses and lending-related commitments in lutu'e periods At least quarterly. Hie allowance for credit losses is reviewed hy the CRO. the cro and the Controller ol the Firm and discussed witti the OWiT. and the Audit Committee As of Oecember 31, . T0l6. JPMorgan Chase deemed the allowance for credit losses to lie appropriate (i c . sufficient to absorb probable credit losses inherent in the portfolio)

Formula-based component

The formula-based component is based on a statistical calculation to provide for incurred credit losses in all consumer loans and performing nsk-rated loans, except lor any loans restructured in TDRs and PCI loans, which are calculated as a pari of the asset-specific and PCi components, respectively, and are discussed later m this Note See Note 14 for more information on TDRs and PCI loans

Formula-based component - Consumer loans and certain lending-related commitments The formula-based allowance for credit losses for ihe consumer portfolio segments is calculated by applying statistical credit loss factors (estimated PD and loss seventies) to the recorded investment balances or loan-equivalent amounts ol pools of loan exposures with similar risk characteristics over a loss emergence penod to amve at an estimate of incurred credit losses Estimated loss emergence periods may vary by product and may change over time, management applies judgment m estimating loss emergence periods, using available credit information and trends In addition, management applies judgment lo the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate ffit* (otal incurred credit losses m the portfolio Management uses additional statistical methods and considers actual portfolio performance, including actual

lw>fs L.'Coeni;ed on delaulted loans and collateral valuation trends to review th ;' appropriateness of the primary statistical loss esiimate The economic impact ol fMi;:ii;ij! modifications of residential real estate loans is not included in me statistical calculation because ol ihe uncertainty regaromg tne type and lesulls ol such modifications

The statistical calculation is then adjusted :o take into consideration model imprecision exiernal factors and current economic events that nave occurred but that are not vet reflected in the factors used to derive the statistical calculation these adjustments are accomplished in pari by analyzing the historical loss experience for each major product segment However, it is difficult to predict whether litstonral loss experience rs indicative of future loss levels Management applies judgment in making this adjustment, taking into account unt ertamties associated with current macroeconomic and political conditions, duality of underwriting standards, borrower behavior, the potential impact of payment recasts within Ihe HELOC portfolio, and other relevant internal and external factors affecting the credit duality of Tie portfolio in certain instances, the inte'rolailor.ships between these factors creaie further uncertainties F or example the performance ol a HELOC inat expenences a payment recast may be affected by both the duality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time ol the payment recast roi junior hen producis, management considers the dehnouency and/or modification status ol any senior hens in determining (he adjustment The application of ditterent inputs into the statistical calculation and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or ronstdering other inputs or assumptions, could affect the estimate of the allowance for credit losses for the consumer credit portfolio

Overall, the allowance for credit losses for the consumer portloho, including credit card, is sensitive to changes in (he economic environment (e g , unemployment rales), delinquency rates, the realizable value of collateral (e g. housing prices), FICO scores, borrower behavior and other risk factors While all ol these factors are important determinants ol overall allowance levels, changes in the various factors may not occur at the same time or at the same rale, or changes may be duectionally inconsistent such that improvement m one factor may offset deterioration m the other in addition, changes in Ihese factors would not necessarily be consistent across all geographies or prnduct types Finally, it is difficult to predicl the extent to which changes tn these factors would ultimately aflect the frequency of losses, the seventy of losses or botli

Formula-based component ■ Wholesale loans and lending-related commitments

The Firm's methodology lor determining the allowance for loan losses and the allowance for lending-related commitments involves the early identification of credits that are deteriorating The formula-based component of the allowance for wholesale loans and lending-related commitments is calculated by applying statistical credit loss factors (estimated P0 and LGD) to the recorded investment balances or loan-equivalent amount over a loss emergence period to arrive at an estimate of incurred credit losses.

The Firm assesses the credit quality of its borrower or counterparty and assigns a risk rating Risk ratings are assigned al origination or acquisition, and if necessary, adjusted tor changes in credit quality over the life of the exposure. In assessing the risk raring of a particular loan or lending-related commitment, among the factors considered are the ohligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation Determining risk ratings involves significant judgment, emphasizing one factor over anoiher or considering additional factors could affect the risk rating assigned by the Firm

PD estimates are based on observable external through-the-cycle data, using credit rating agency default statistics

An LGD estimate ts assigned to each loan or lending-related commitment The estimate represents the amount of economic loss if the obligor were to default The type of obligor, quality of collateral, and the seniority ol the Firm's lending exposure in the obligor's capital structure affect LGD LGD estimates are based on the rirm's history of actual credit losses over more than one credit cycle. Changes to the time period used for PD and LGD estimates (for example, point-m-dmc loss versus longer-term views of the credit cycle) could also alfect the allowance for credil losses

The Firm applies judgment in estimating PD. LGD, loss emergence period and loan-equivalent amounts used in calculating the allowance for credit losses Wherever possible, the Firm uses independent, verifiable data or the frrm's own historical loss experience in its models for estimating the allowances, but differences in characteristics between the Firm's specific loans or lending-related commitments and those reflected in external and Firm-specific historical data could affect loss estimates, estimates of PD, LGD. Joss emergence period and loan-equivalent used are subject to periodic refinement based on any changes to underlying external or Firm-specific historical data The use of different inputs, estimates or (methodologies could change the amount of the allowance for credit losses determined appropriate by the Firm
In addition to the modeled loss estimates applied to wholesale loans and lending-related commitments, management applies its judgment lo adjust the modeled loss estimates for wholesale loans, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both LGD and PD are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant These estimates are based on management's view of uncertainties that relate to current macroeconomic, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio

Asset-specif ic component
The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as nsk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller Jeans art evaluated as pools using historical loss experience for the respective class of assets Scored loans (i.e.. consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by nsk rating

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the allowance for loan losses In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as (he difference between the recorded investment in the loan and the loan's fair value impaired col lateral-dependent loans are charged down to (he fair value of collateral less costs to sell For any of these impaired loans, the amount of the asset-specific allowance required to he recorded, if any, is dependent upon the recorded investment in the loan (including prior charge-offs), expected cash flows and/or fair value of assels. See nocc 14 for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of forgone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers ihe potential for redefault For residential real estate loans modilicd in TORs. the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses in developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data The rum also considers its own historical loss experience to date based on actual redefaulted modified loans For credit

card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program ror wholesale loans modified in TORs, expected losses incorporate management's expectation of the borrower's ability to repay under the modilied terms

Estimating the liming and amounts of future cash flows is highly judgmental as these cash Dow projections rely upon estimates such as loss seventies, asset valuations, default rates (including redefault rates on modified loans), the amounts and timing of interest or principal payments (including any expecied prepayments) or other factors that are reflective ol current and expected market conditions These estimates are, in turn, dependent on factors such as the duration of current overall economic conditions, industry-, portfolio-, or borrower-specific factors, the expected outcome of insolvency proceedings as well as. in certain circumstances, other economic factors, including the level of future home prices All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

PCI loans
In connection with the Washington Mutual transaction. JPMorgan Chase acquired certain PCt loans, which are accounted for as described in Note 14 The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates (including redefault rates on modified loans), loss seventies, the amounts and timing o! prepayments and other factors that are reflective uf current and expecied future market conditions. These estimates are dependent on assumptions regarding the level of future home prices, and (he duration of current overall economic conditions, among other factors These estimates and assumptions require signihcant management judgment and certain assumptions are highly subjective.

Notes to consolidated financial statements

Allowance lor credit losses and related information
I fie taOle below Summ,in;.'S mlormation arwul the allowances for loan tosses a.itl (endmg-reiaiing cornmitmenrs and nicftides a breakdown of loans and lending-related commitments by impau mem meihodologv

rear ended December 31. f<n mritaiK)

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Notes to consolidated financial statements

Note 16 - variable interest entities

For a further description ol JPUorgan Chase's accounting policies regarding consolidation of VIES, see Note 1

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Fitm considers a "sponsored" VIE (0 encfude any entity where (I / JPMorgan Chase is the primary beneficiary of the structure. (2) the VIC rs used by JPMorgan Chase tosecuntize Firm assets. (3) the VIE issues financial instruments with the JPMorgan Chase name; or {*) the entity is a JPMorgan Chase-administered asset-backed commercial paper conduit

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Mortgage and other secur iiintiori trusts

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The Firm's other business segments are also involved with vies, but to a lesser extent, as follows.

- Asset ft wealth Management AWM sponsors and manages certain funds that are deemed VIEs As assei manager of the funds. AWM earns a fee based on assels managed, the Ice vanes with each (und's investment objective and 15 competitively priced For fund entities that qualify as VIEs, AWM's interests are. in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities
- Commercial Banking CB makes investments in and provides lending to community development entities that may meet the definition of a vie. in addition, CB provides financing and lending-related services to certain client-sponsored VIEs. in general. CB does not control the activities of these entities and does not consolidate these entities.
- Corporate Corporate is involved wuh entities that may meet the definition of vies: however these entities are generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 237 of this Note
particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/ or retain certain beneficial interests in the securitization trusts

Firm-sponsored mortgage and other securitization trusts The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including student loans) primarily in its CCB and CiB businesses. Depending on the
The following table presents the total unpaid principal amount of assets held m Tirm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm Continuing involvement includes servicing the loans, holding senior interests or subordinated interests, lecourse or guarantee arrangements, and derivative transactions in certain insiances, Ihe Firm's only continuing involvement is servicing the loans See Securitization activity on page 238 of this Noie for further information regarding the Firm's (.ash flows with and interests retained in nonconsolidated VIES, and pages 238-239 of this Note (or information on the Firm's loan sales to U 5 government agencies

' Prmcipal amount outstanding".

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Significant Firm-sponsored variable interest entities Credit card securitizations The Card business securitizes both originated and Purchased credit card loans, primarily through the Chase issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seder's interest m the receivables, retaining certain senior and subordinated Securities and maintaining escrow accounts

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these vies through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts Additionally, the nature and extent of the Firm's other continuing involvement with ihe trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits Irom these viFs that could potentially be significant

The underlying securitized credit card receivables and other assets ol the securitization trusts are available only for payment of the beneficial interests issued by Ihe securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's creditors

The agreements with the credit card securitization (ruses require the Firm to maintain a minimum undivided interest in the credit card trusts (generally 5%) As ol December 31. 2016 and 2015. the Firm held undivided interests in Firm-sponsored credit card securitization trusts of (8 9 billion and 113 6 billion, respectively The Firm maintained an average undivided interest m principal receivables owned by (hose trusts of approximately 16% and 224b for Ihe years ended December 31. 2016 and 2015 As of both December 31. 2016 and 2015. Ihe Firm did noi retain any senior securities and retained (5 3 billion of subordinated securities in certain of its credit card securitization trusts The T irm's undivided interests m the credit card trusts and securities retained are eliminated in consolidation

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m sponsored See pages) 18 239 ol tbis Note lor information or tmr (gage-related consul ner receivables pin chased from third

(a) ticludes U S. government arjency setunti2fltions and re securitizations, which a:
the Firm's loan uk'S to U 5 government agencies (hi Consists of securities Dieted by commercial loans (utedominantly 'ea(estate) ai parties.
(c) tidudesil«taic'"fig: retained servicing (see N-jte 17 for a discussion ol USRs), sccuniies retained from loan tales to US government agencies, iniervs: rale and foreign eichangr deinatives pnnuriiy used to numagr interest uteand foreign eictungr- risks ol securitization entities (See Mote 6 loi further mfor ma:ion on derivatives) senior and subordinated securm* ol 1180 million and 149 million, respectively, il December 31 2016, and (163 miJlw, and 173 million, respectiver/. al December 31.20IS.*hicht.helirm purchased in connection witb CIB's secondary markei-making aclmues.
d) includes interests held in te-securitization transactions.
e) As o! Oecember 31, 2016 and 2015.61% and 7691 lesperliwly of :t>e Fiims retained searriliza:ion interests, winch are earned al lair value, were risk rated "A" or belief, on an SAP-equivalent basis. The irlainrd interest in onme resdeniial nuitgages consisted of Il S billion and ll 9 billion of investment padeind 177 million arid 193 million of nomnvestment grade retained imerv.tsal December Jl. 2016 and 201S. resoeclively The retained interests in commercial and other securnizalicms Musts convert of 12 4 billion <uk! 13 7 billion ol investment grade and S.'lO million and 1198 million of noYKmriimenf c™*e rettuiro rr.erer.iM December 31.20)6 nxl 2015. itnpetlively

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Notes to consolidated financial statements

Rvsioemial mortgage

The - inn seniNUzcj residential mortgage loans originated bv CCD as well as residential mortgage loans purchased Irom third parties bv eithei CCB or CIB CCB generally retains servicing for all residential mortgage loans it originated or purchased, and for certain mortgage loans purchased by CiB F or securitizations ol loans serviced by CCB the Firm has the power to direct the signilicant activities of (he vtc because it is responsible lo> decisions related to loan modifications and workouts CCB may also retain an interest upon securitization

in addition, CIB engages m underwriting and trading activities involving securities issued by rum-sponsored securitization trusts as a result. CIF) ai times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations at (he lime of securitization, and/or reacquires positions in the secondary market m tne normal course ol business (n certain instances, as a result of the positions retained or reacquired by CiB or held by Cf.B. when considered together with ihe servicing arrangements entered into by CCB. ihe Tirm is deemed lo be the primary beneficiary of certain securitization trusts See the tabic on page 237 oi tins Note foi more information on consolidated residential mortgage securitizations

The Cjrm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and tneiefore does not have the power to dweci Ihe most significant activities of the trusi) or does not hold a hcneficial interest in the trust that could potentially be significant io the trusl At December 31. ?0l$ and 2015. the rirm did not consolidate the assets ol certain Fiim-sponsored residential mortgage securitization VIEs, m which the Firm had continuing mvolvrjmenl. primarily due to the fact thai Ihe Firm did not hold an interest in these trusts that could potentially be significant to the trusts See the table on page 237 of this Note for more information on the consolidated residential mortgage securitizations, and the (able on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations

Commercial mortgages and other consumer securitizations CIB originates and securitizes commercial mortgage loans, and engages m underwriting and trading activities involving the securities issued by securitization trusts CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but. gent-rally, the Firm does not service commercial loan securitizations For commercial mortgage securitizations the Dower to direct the Significant activities of the VIE generally is held by the Servicer or investors in a specified class of securities ("controlling class') The Firm generally does not retain an interest in the controlling class in its sponsored commercial mortgage securitization transactions See the table on page 237 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page ol inis Note loi lurther information on interests neid ni nonconsolidated securitizations

Tie Firm retains sei vicing responsibilities for certain student loan securitizahons The Firm has Ihp power io direct the artivilies ot these VIFs through these servicing responsibilities See ihe table on page 237 of tins Note for more information on the consolidated student loan securitizations, and the table on the previous page of (his Note for further information on interests field in no neon sol id at ed securitizations

fte- secur it iza tions

The Firm engages m certain re-serurmzation transactions m which debt securities aie transferred to a vie in exchange tor new beneficial interests These transfers occur in connection with both agency (Federal National mortgage Association ('Fannie Mae"), Federal Home Loan Mortgage Corporation ("Freddie Mac') and Government National Mortgage Association ("Ginnie Mae')) and nonagency (private-label) sponsored VIFs. which may be backed by either residential or commercial mortgages. The Firm's consolidation analysts is largely dependent on the Firm's role and imprest in the re-securitization trusts During the years ended December 31, 2016, 2015 and 2014, the Fum transferred $11 2 billion, 121 9 billion and 122 7 hillion, respectively, of securities lo agency VIEs, and 1647 million. 1777 million and ll l billion, respectively, of securities to private-label VIFs

Most re-securitizations with which the Firm is involved are client-driven n ansactions in which a specific client or group of clients is seeking a specific return or nsk profile For these transactions, the Firm has concluded thai the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-secur it nation trust, therefore the Firm does not consolidate the re-securitization vie.

In more limited circumstances, the Firm creates a nonagency re-securitization trust independently and not in conjunction with specific clients in these circumstances. Ihe Firm is deemed to have the unilateral ability to direct the mosr significant activities ol the re-secunlization trust because of the decisions made during the establishment and design of (he trust, therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party re-secunnzations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-secuntization trust, either because it was not involved in the initial design of the trust, or the Firm is involved with an independent third-party sponsor end demonstrates shared power over the creation of the trust, therefore, the Firm does not consolidate the re-securitization VIE

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as o! Decembei 31. 2016 and 201 v loial assets '.mi incline, ihe notional amouni o [1] inierest-oniv seuiniiest ol nonconsolinaied Cimi-snoilsored pnva:e ;.ibcl re-securitization entmes in which tin-1 irm lias coinmning involvement were IS/i million and 12 2 billion respecilvely Al December 31 201 6 and 201 5 tneiirm held 12 0 billion and 14 6 billion, respectively, ol interests in nonconsolidaied agency re-securitizaimn entmes The Firm's exposure lo non consolidai<>d privaip-l<iti?l n-securitization entmes as o: neremher 31 2016 and 2015 was not material As ol December 31. 2016 and 201 b the I irm did not consolidate any agpnev re-securitizanons as ol December 31. 2016 and 20 IS. ihe Firm consolidated an insignificant amount of assets and liahilmes ol f irm-sponsored private-label re-secunnzalions

Multi-seller conduits

Multi-seller conduit entities an? separate bankruptcy remote entities thai provide secured financing collateralized bv pools ot receivables and other financial assets, to customers ol ihe Fum The conduits fund their financing facilities through the issuance of highly rated commercial paper The primary source oi repayment of the commercial paper is the cash flows from the pools ol assets In most instances, the assets aie structuied with deal-specific credit enhancements provided ;o tne conduits bv the customers 0 e. sellers) or other third parties Deal-specific credit enhancements aie generally structured to cover a multiple of histoncal losses expected on the pool ol assels. and are typically in the lorm of overcoilateralizaiion provided bv the seller l h* deal-spcufic credit enhancements mitigate the Firm's potential losses on us agreements with the conduits

To ensuie timely repayment ot the commercial paper, and to provide the conduits with funding to provide financing io customers in the event that the conduits do noi obtain funding m Ihe commercial paper markei. e<fcb asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it piovided by IPMorgan Chase Bank, N A JPMorgan Chase Bank. H a also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in ihp form ol standby letters ol credit The amouni of program-wide credit enhancement required is based upon commercial paper issuance and approximates 104 ot the outstanding balance of commercial paper The Firm consolidates Us Firm-administered muln-sclier conduits, as ihe Firm has both the power to direct ihe significant activities of the conduits and a potentially significant economic interest m the conduits As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits The Firm's interests that could potentially be significant to the VIFs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit

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enhancement laciioes tKovirted 10 the condmis Sri- page 2 3 7 of ibis Noli' lyr further minimal ion un con sol id a led VIE assets and liabilities

m me normal course of business jfMorgan Chase makes markets in and invests m commercial paper is\ued hy Ihe ·irm administered mulii seller conduits Ihe Firm held 121 2 billion and 115 7 billion of the commercial paper issued by tne Firm-administered mnlii-sellcr conduits al Oecember 31. 201ft and 2015. respecilvely The Firm s investments reflect the Tirm s funding needs and capacity and were not dnven bv market illiquidity The nrm is not obligated under any agreement 10 purchase the commercial paper issued by the Firm-administered mulu-seller conduits

Deal-specific liquidity facilities, program-wide liquidny and credit enhancement provided by the Firm have been eliminated in consolidation The Fum or the Firm-admmistered multi-seller conduits provide lending-related commitments to certain clients of (he Firm-ad ministered multi-seller conduits Ttie unfunded commitments were 17 4 biluon and 15 6 hillion at Decemher 31, 2016 and 201S. respectively and are reported as oft-halance sheet lendmg-relaied commitments For more information on ofi-balaiire sheet lending-related commitments, see Note 2<J VIEs associated with investor intermediation activities As a linancial intermediary, the Firm creates ceriain types of vies and also structures transactions with these Vlfcs. typically using derivatives, to meet investor needs The Finn may also provide liquidity and other support the risks inherent in ihe derivative instruments or liquidity commitments are managed similarly lo othei credit, market or liquidity risks to which the Firm is exposed The principal types ol vies for which the Firm is engaged in on behalf of clients are municipal bond vehicles Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow investors to linance their municipal bond invesiments ai short-term rates in a typical TOB transaction, Ihe trust purchases highly rated municipal bond(s) ol a single issuer and funds the purchase by issuing two types ol securities (1) puttable floating-rate certificates ("Floaters") and (2) inverse floating-rale residual interests ("Residuals"). The Floaters are typically purchased by money market lunds or other short-term investors and may be tendered, with requisite notice, to the TOB trust The Residuals are retained by the investor seeking 10 finance its municipal bond investment TOB transactions where the Residual rs held by a third party investor are typically known as Customer TOB trusts, and Non-Customer 108 trusts are transactions where Ihe Residual is retained by the firm. Ihe Firm serves as sponsor (or all Non-Customer TOB transactions and certain Customer TOB transactions established pnor to 2014. The rirm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/ or sponsor

Notes to consolidated financial statements

J.P. Morgan Securities LLC may serve as a remarketing agent on the Floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the Floaters, conducting the initial placement and remarketing tendered Floaters. The remarketing agent may, but is not obligated to. make markets in Floaters. At December 31. 2016 and 2015, the Firm held an insignificant amount of Floaters on its Consolidated balance sheets: and did not hold any significant amounts during 2016and 2015

JPMorgan Chase Bank. N.A. or J.P Morgan Securities LLC often serves as (he sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade In addition, the liquidity provider's exposure is typically further limited by the high credit quality of (he underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the Floaters may "put," or tender, their Floaters to the TOB trust, if the remarketing agent cannot Successfully remarket the Floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the TOB trust's purchase of the Floaters, or it directly purchases the tendered Floaters, in certain Customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. in (hose transactions, upon the termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay amounts owed to the Fum, as liquidity or tender option provider, the Firm has recourse to the third parly Residual holders for any shortfall Residual holders with reimbursement agreements are required lo post collateral with the Firm to support such reimbursement obligations should the market value of the underlying municipal bonds decline. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds. TOB trusts are considered to be variable interest entities. The Firm consolidates Non-Customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and it has the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle The Firm does not consolidate Customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. Certain non-consolidated Customer TOB trusts are sponsored by a third party, and not the Firm. See page 237 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31. 2016 and 2015, including the ratings profile of the vies' assets, was as follows

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quality of the underlying assets where the Firm does not have the power to direct the activities of the vit that most significantly impact the viE's economic perlormance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets in the same manner il would record and report positions in respect ot any other third-party transaction

Consolidated VIE assets and liabilities

The following table presents information on assels and liabilities related to vies consolidated by the Firm as of December 31, 2016 and 2015

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790 f 46,709 J 31.181 %

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VIE program type"

1,7** 2.463

Firm-sponsored credi: card trusts rirm-admimslered multi-setlei conduits

3,185 S 75,614 % 3.321 | 82.120 % 39,047 % 49Q SS 39.537

Beneliciat■ • V, \ . ' imciestsin ■ \ vit assets** "". Other"

Mortgage securitization entiles* Student loin tnunliation eatitxt Other

remtier 31,2015 tin mitliortU.

VIE program type**

718 1 48.076) 27,906 »

2.300 1.987 2.126

41.879 1 809 $

Firm-sponsored ciedii card trusts Firm-administered mirlii-sellei conduits Municipal bond vrimles Mortgage securitization entities" ¹ Student loan securiiicalion entities

3 736 1 75.104 S 2.76S 1 81.605

(al Excludes intercompany transactions, which are ehmirviiel in consolidation

(bl includes residential and rommercial mori£ap' secuntiial ions as well as re-securiiiladoni

(O includes asse's classified as cash. AFS secunties, and other assets on the Consolidaied balance sheers.

d) The assets of ihe consolxJa'.ed vir s included in the ivneram types above are used to seiiie ihe liabilities of those entities. The difference between total assets and total liaDilities lecognlied for consolidated vi[s represents He-Funs interest 111 the consolidated Vlis lor each program type

e) The interesl beamy; bennticial interest iMbdiuit issued by consolidaied ViLs are classified in the line item on the Consolidated balance sheets titled. "Beneficial interrs:s issued by cunsnottired variable tmeitv rr.tilics." The hoWers of these bene/ioaf mteret:i do not have recourse to the general ere of IPUorgan Chase, included in beneffcial interests in Vlf assets are long leim henehfial interests ol (33 4 Dill ion and SJO 6 iHIUon at Decembei 31.

. 2016 and 2015. resiwclivrl* The ma'.urilies nt ;i* long-term beneficial interests as of December 31. Z0I6, weieis lollows. Ill 6 bill 100 undrr oney 119 1 billion between one and (ivy years, and 12 7 billion over live years (0 includes liabilities classified as accounts payable and other liabilities un ihe Consolidated balance sheeis.

(a) Represents the eicess/(def<it) of the In: values ol municipal bora: assets available to repay tl* liquidity facilities, it diavm. (bl ihe ratings scale is presented on an SAP-equivalent basrs. (Cl TfvMsecurrtypouuomraveoeendeleasedbvtr^

Jl'Uorgiincnase A Cn./20l6 Annual Rcpon

Notes to consolidated ftn.iiif.tal statements

Loan securitizations

me FirᵢT- iidi scorn i/ed a-ic: sold a vane:v ol l:>j:r.. including residential mo^inaee. cieflU rard uufle:n and romniernal (irmiarilv re-aiPtl to rt-ai cM.iiei 'ouns. as we'l as dew securities Trio purposes of lhese securitization . transactions wvre lo satisfy investor demaric aim to generate liauidily loi the Firm

Tinei3"i securmzed All Ustt flew" duriru; |hr period- Proce-os received from lev «!« as I Prw-iffdsieceived from loan sales as! Lev„| ;

1 Mai proceeds received liom luan sales

""ti.-ifl fees collected Pwcliau-s nl pn-viousfy translerred hrnnru (< ihe underlying collateral)"■

Cash flows received on inli-u-sn

id option arus. Fie l tides re

I 1'ichrdes pnme/AHA, "ac.

For n sec utilization; n whi:h the Firm is not required to consolidate the trust, me firm records the transfer n! ihe loan receivable io the fust as a sate when all ol the following accounting criteria for a sale are met (I) the transferred financial assets aie legally isolated lr:>m the Firm's credno's, (2) the transferee or henehcul interest

Loans and excess USRs sold to U.S. government-sponsored enterprises, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other thtrrj-party-sponsored securitization entities In addition to the amounts reported in the securitization activity tables above, the firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess USRs on a nonrecourse basis, predominantly to U S government sponsoicd enterprises ("U S GSEs"). These loans and excess MSRs are sold primarily lor the purpose of securitization by the U.S CSFs. who provide certain guarantee provisions (e g., credit enhancement of the loans) The Firm also sells loans into securitization transactions pursuant to Ginnie Mae

holder can ;i'?dge or enLhange the iiansterrf-n financial assf-is and 13) ihe Firm floes not maintain eUeciivt- rioi'oJ over the transferred finannal assrts ie g , the I irm cannot repurchase the daiisli-ned assets before their maturity and ii does noi have the ability lo unilaterally cause the holder to return the transferred assets)

Besdenlul -.. bxrWneruil ' ■

For loan securitizations accuurued tor as a sale, Ihe Firm recognizes a gam or loss based on the difference between tne vame of prnreeds received (including cash, beneficial mteiesis, or servicing asseis received) and the carrying value of the assels sold Gams and losses on securitizations are reported in noninterest revenue

i1fif.-C-.-i4 <http://i1fif.-C-.-i4> H-i>:n:H;iVj 0'l'l.rn;!if "f fd.irli
CLU!OH IIMN Si
arc Ronerallf sniij ',imr;I¥ al'.cr >.-Ijii
il tmlmlp'. Hir »»lu; ol MSRs n-t i-C upon in" ^.i
) dams on loan sain m: Midi- the valueMSH\

■■-i .idd'iiin-1 j ine : :ms ul'lif;,ii'un io n-puif base a-tiir loans cue to inaif-ai breaches of ren't-sentatiois and warrant ips ^s dr'.cussert in Noit- 2° snt- F irm aiso n.is the n;>nun i;i repurchase delinquent loans Hi.it <http://Hi.it> u services 'or Grime Mae loan poois. as we l as for other ll S government agencies under certain auangements The Tirm typically eiec:s to renin: hast- delmqueni loans Irom Gmnip Mae loan pool- as il continues to service ihem and/oi manage the inieclosurf inoce-s m accordance with the applicable rfqjnemeir.s, and sutn loans continue io be insuied or tfuaraniee:! when the (irm's repurchase option betomes exercisable, such luans must be reported on ihe Consolidated balance sheets as a loan with a corresponding liability. As nf December 31. 201 h and 201a. the Finn had recorded on its Consolidated balance sheets 59 6 billion and (11 l hillion respectively, ol loans thai either had been lepuichased or loi which the i-irm had an option to repurchase fiedommantly all of these amounts relate io loans that have been repurchased from Ginnie Mae luan pool'. Additionally, al December 31. 2016 and 2015, (he Firm had real estate owned of 1142 million and 1343 mi.lion, resnei lively, and certain foreclosed governmem-giiaranu-ed residential moiigage loans included m accrued ir hoi est ana accounts receivable of ll 0 billion and tl 1 billion, respe: nve'y. resulting from voluntary repurchases of loans Substantially all of these loans and real estaie are insured tn fiuaianteed by 0 S government agencies For addilion.il <http://addilion.il> information, itier to Note 14

Loan delinquencies and liquidation losses
Secuniu.ii <http://Secuniu.ii> aswts
.90 davs nasi due

The table below includes mlormation about component- of non consolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Tu rn has continuing involvement, and delinquencies as of December 31, 2016 and 2015.

Secur ht ned loans'" Resin rntial morrp.age
Prime/ Alt A A 0;i'.iWi ARUs
Subpnme Commerciil and oll*r

liquitiat** tosses
As ol or k« ine year crvSri Decemfer 31.liiimiiiirn^)

S 57.S43 (M, 70S I 6,169 J H.12S S 1,160 (

19,903 ?> S49 4.1 S6 S.448 1.0S7

ivdr. ar December 31. 2016 and 2015 The 1 I"S 9
1"6 4 billion and 162 4 lullkui. respeciively. ol illion. respectively, ol lu.ni <http://lu.ni> securitizations convviidate

71,464 811.310 1.755 I.KfJfl 643
(148910 1 169.S7l. 1 12.110 (IS.f.fil (2.890 t 1.757

.ipn-rMjii-d Sftsmere 119V i. billior, anc i;ii (■ hillion respet !>y of loar-s sc-cnntired a: vw*mraei 31. ;tiin and 2U15 eiclur rum has no conli.H,iri|;irivii'vemenl. .ind \t 3 hil'ion fl.iri (lf. :esheeis»i IK-cembc-r 31. ?nif, and 2315

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Notes to consolidated financial statements

Note 17 - Goodwill and Mortgage servicing rights Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and (he fair value of the nel assets acquired. Subseauent to initial recognition, goodwill is not amortized but 15 tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment

.2015
2014

1 30.797	(30.769	(30.941
6.772	6.772	6.7B0
2.161	2 861	2.H61
6,851	6. OH 3	6.964

- - 101

The goodwill associated wuh each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating commmee. The following table presents goodwill attnbuied to the business segments.

December 31. fwevj lots)
Total g(
dwill

Consumer I Cnininunity Banking
CupCiratei investmeni Bank
Commercial Hanking
Asset s Wealth Management
Corporate
1 47.281 (4T.JJ5 (47.647
2014
' 2«M

The following table presents changes in the carrying amount of goodwill.

■2015 •

Balance at bc-rjinning of [KTUd	1 47,115	(47.647	(4H.081
Clianges during the period hum			
Uu^mesj comtinalium	-2s43		
Balance at 31,			
DiSDosnions[a]	(72)	(160)	(80)
Oihe-*	35(110)	(397)	
	(47.288	1 47.325	1 47.647

la) rc>r2016 represents AWM goodwill, vrlncli was disposed of asparto AWM sales completed in March 2016 Foi 2015 includes 1101 miCio ol Pnvate Faulty goodwill, which was dtipmea ol asiurt ol the Prrva Eijiiivwlf completed in lauuarv 2015
(bl includes loreiim ciiricnry translation adjustments. o:her tai-rela'.M adjustments, and. In 2014. goodwill impaiimnii: associated with llu Tirm's Private tquilr business of 1276 million

impairment testing

The Firm's goodwill was not impaired at December 31. 2016 and 2015. Further, except for goodwill related to its heritage Private Equity business of (276 million, the Firm's goodwill was not impaired at December 31,2014.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired If the fair value is less than the carrying value (including goodwill), then a second step is performed in ihe second step, the implied current fair value ol the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill if the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge ts recognized for the excess, ll the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units" allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units tn the goodwill impairment testing Reporting unit equity ts determined on a similar basis as the allocation of equity to the Firm's lines of husiness, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III) and capital levels for similarly raied peers Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed

The primary method the Firm uses lo estimate the lair value of its reporting units is the mcome approach This approach projects cash flows lor ihe forecast period and uses the perpetuity growth method to tabulate terminal values These cash flows and terminal values are then discounted using an appropriate discount rale Pintecttons ol cash flows are based on the reporting units' earnings forecasts, which include the estimated eflects of regulatory and legislative changes, and which are reviewed with the senior management of the Firm The discouni iate used lor each reporting unit represents an estimate of the cost ol equity for that reporting unit and is determined considering the Firm's overall estimated cost ot equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (loi example, for higher levels of risk or uncertainly associated with the business or management's forecasts and assumptions) To assess the reasonableness of the discount rales used tor each reporting unit management compares the discouni rate to the estimated cost of equity for publicly traded uisliUilious with similar businesses and risk characteristic!, in addition, the weighted average rn^t of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensuie reasonableness

The valuations derived from the discounted cash flow analysis are then compared with market-based trading and transaction multiples (or relevant competitors 1 raring and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exisl between the Firm's businesses and competitor institutions Management also lakes into consideranon a comparison between the aggregate fair values of the Firm's reporting units and JPUorgan Chase's market capitalization In evaluating llus comparison, management considers several . factors, including (0 a control premium that wculd exist m a market transaction, (u) factors related to the level of execution risk that would exist at the firmwide level I*iai do not exist at Ihe reporting unit level and (m) shori-term market volatility and other (actors that do not directly affect the value of individual reporting units.

Declines in business perlormance. increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, estimales of adverse regulatory or legislative changes or increases m the estimated market cost of equity, could cause the estimaled fair values of the Firm's reporting unils or their associated goodwill to decline in the luture, which could result in a material impairment charge to earnings in a future period relaled to some portion of the associated goodwill.

Mortgage servicing rights

USRs represem Ihe fair value of expected future rash flows for performing servicing activities for others The fair value considers estimated future servicing lees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained

As permitred by u.S GAAP, the Tirm has elected to account for us MSFrs at fair value lhc f irm treats its MSRs as a single class of servicing assets based on the availability of market inputs used lo measure the fair value of its MSR asset and its treatment of MSFts as one aggregate pool for risk management purposes The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which protects MSR casfi flows over multiple interest rate scenarios in conjunction with the rirm's prepayment model, and then discounts these cash flows at risk-adjusted rates The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late chaiges and other ancillary revenue, and other economic factors The Firm compares lair value estimates and assumptions io observable market data where available, and also considers recent market activity and actual portfolio experience

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Notes to consolidated financial statements

The f.i.r value of MSHs is sensitive to changes n interest raies including their eHeci or. p-epavmeni speeds MSRs lynirally decrease in value when mteres; rales decline because declining interest rates tend to increase prepayments and therefore reduce ihe evppcted Me ol the net servicing cash Hows mat comprise the MSR asset Conversely securities {e g. mortgage-barked securities) principal-only cemlicaies and certain derivatives (i e
Asol a lor tt»ye

The following (able summarizes MSR activity for (he years ended Dererriner 31. 2016. 2015 and 20H

r tnfcrj December 31. (inrmflais. met* vnVre otherwise noted)

ran value a; beginning ol period HSRainvilv briijinations ol UStt Purchase ot USRs Disposition of uses'-

■ec additm
loial changes ii

Chanel's due io coUecnon/ieaiiiaiion of upected cash Changes in valuation due lu inputs and assumptions Charges due lo market mtvuM rales and oilier·Chang's in valuator' due to oilier inputs and assii-nf Pi netted usa ii.iuvs if. (. cos: io service) LNSCOuni rates

Prenaynn-nt model changes and other"

dui to other Inputs and assumpnoi

lotal chan«es in valuation due lo inputs and assumed idi

Fair value at December 31,

Ihe following table pr"s>:nis inc.- CO^mnt- ri;s o! mortgage-lees and related income (including nu- inuiac; ol WSH est management activities) for the years ended Pecembp: 31. 2016. 2015 and 20H

1016 2015

veai ended December 31. («< mil ions)
s 851 S Si

CCB mortgage lees and related Met production revenue Net mortgage semrng ievenu(Opera; inf< revenui'

Total net marlgige servicing

Ihe l.Kiie hclon oullines tne key economic assumptions used :o dei'.'rinine trie fair value ol the Firm s MSRs at Decembei j 1 2016and;oi5 and outlines me sensitivities o[1] those lair values io immed.ate adverse changes in those assumptions, as delmed below

ionrCPH'1 941% 981%

in adjusted so >r 100 basis at

inljir valueol 10% adverse change 1 1211) 1 (271) m tair value ol i0% adverse change (4451 (SZ9)

8.55% o saH

1 I7«) J 12'jB) (477) (498)

CPR Const.m: prepayment ra:e

The sensitivity analysis in the diDeeding table is hypothetical and should be used with ciulion. Changes in fan value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change m ihe assumptions to the change in fair value are of len higtHy interrelated and may not be linear In ihrs table Ihe effect thai a change in a particular assumplion mav have on the lau value is calculated without changing any other assumption In reality, changes in one (actor may result m changes m another, which would cither magnify or counteract the impact of (he initial change

Change in unrealised gains/doi
s. at December 31, (in billions)'"
SS
4.7

in:ractual service lees late lees and o:l«r ancillary lees includes in in

is serviced a: December 31, (in billions)

Servicer advances, net nf an allowance fur uncohectible a'

lion, a portion of t"i» i actual and expected

(a) inciuoes eicess USDs irai-sferreo to art-ny sponsored trusts in enhance for stnopec moiigaie bacaed securities ("StiDS") in each tifs" suits was arouired bv third urucs a', the transacl«n u:e iht rum acquired ihe remaining balance of those SUIS as trading securities.
(0) Represents both the impaci of changes in etlimjied lulunt preptvmenii due 10 Chances ir, market interest rain, aid tlvj diflerence hftwee nrewrments
(c) eepresenii ciunges m prepayment*, orner man (nose tnriimtibte to i-nanceimimrkn menu rales.
(Il Represent amounts tne rum oavs as the »"in ft"., uhtduled pnnrioal and mierest. tam and msurance). which will generally be reimbursed within a ihorl period of time aher iht advance Irom futuie cash ftan Iron the inni or the underlying bans. The firm's credit n* associated wiih these servicer advances is minima' because reimbursement ol cvt advanrei is inncaKy senoi 10 an cash payments to Investors in adcifun the Firm miinumi the rnjhi to slop payment to investors if me collateral n insullKient to covei ihe advance Hoover certain ol these tervicei advancn may not be nunerabte 0 titer were not made in accoidance with applicaole rides and agrcemer.is.
(e) For tne year ending Oecember 11 2014 taentgative impaci was primaUr mated ta higher capital allocated ta tne ii«-lr^Serviui» business vAicli in turn, resulted in an nniu w the cms The resoium OAS asiumnuon aas conniem with capital and return Requirements ihe Fum believed a market oanuupim vmukj coiruder. taking .mo ■lcoum lactort such as tne opcratmt risk environment and repdaiory and tconooic capital requirements.

Mortgage leeiind related income (2,491 I'M) Hi

a) Refjretents both the impart of changes in estimated luture rxruaymenrs due tc crun^-is in iiij.-te: interest nh-i and the difference between ai -ual and i-ipccted pren.iv <http://pren.iv> men:-;
b) Represents the asgiegaic impact ol chairs in model "inuls and assumptions such as prmecied casti Hows W g cost to seiviiel discount tales and changes m prepayments other Hun ;i"ise attribuiabk to changes in nurkPi interest rales (Pi charges in prepjynn-nts due to changes m norm- prices!

JPUorgan Chase I Coyjoift Annual Bepon

Notes to consolidated financial statements

Note 18 - Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset.

JPUorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful hie and reviewed for impairment on an ongoing basis

Note 19 - Deposits

At December 31, 2016 and 2015, noninterest-bearing and iniBrest-bearmg deposits were as follows

Note 20 - Accounts payable and other liabilities

Accounts payable and other liabilities consist of brokerage payables, which includes payables to customers, dealers and clearing organizations, and payables from security purchases that did not settle, income taxes payables, accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations lo return securities received as collateral

EUrjfcerige Hvabtes Accounts payable and

The following table details the components of accounts payable and other liabilities.

3Ctkirarikiivj>>;-;.;f.

I 107,632 70 006

% 190,543 t 177.638

Note 21 - Long-term debt

JPMorgan Chase issues long-term debt denominated m various currencies, predominantly U S dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income. The following table >s a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation ad;uslmer)ts and fair value adjustments, where applicable) by remaining contractual maturity as ol December 31. 2016

I 57.938

15,497 0.17-7.25%

f 117.7S8 44.178 0 16-7 ZS%

% 12,10* 11,470 0.09-6 40% t 2.0*6 864

i Sl.920 7,199 0.45-6.40% * 14.S4J 9

j.ie-i.otm

ea.\\^'[(?Jl-SW«M..s'.^'ArhBi Sy>«jr;-kfa-aTPH*yafcs^

Variable rate interest ratw'"

Variable rate Interest idles*"

Parent

Senior debt.

Subordinated debi

% 128.9*7 34,76* 0.09-7.25%

t IMI1

Subtotal S 26,919

1.245 0.82-8 51%

(181,789

U-S. offices Nonintcresi-bearing IK ere*i-beano; linciuded ?1Z,?4S and SI0vl6atfau value)'*

Total deposits In U S. effices

non-U S. offices

Nonmterrsl bearing

in; erry-tearing [included 11,667 ar

j 1.600 at laii value)'"

400,131

T37.940

14.764

221.635

192.7Z1 663.004

14.484 '

209.S0I '

1 29-1 49% 3,562

57,000 0.83-1.21% S 1.100

* 141

11,000 0.41-0 67% S 4.890 2.999 1 10-7.50% S 122

S 179 79,340 0 41-1.21% i 1,129 19,179 0 00-7 50% S 1.884

i 19] 71.390 0 17 0 72% J. 5,550 20.588 0 47 7 2B%

Total deposils In non-U S. offices

% 1.37S.179 H .279.715

a) Includes structured notes clasulied as deposi'.i loi which the lair uprion has beer> elected f» further discussion, see htole 4

b) Prior periods have been lemsed to conlomiwiih current period presentation.

December 31; (In rriThons]

At December 31. 2016 and 2015. time deposits in denominations of \ 250.000 or more were as follows

j/,^-'-.>.*Z01»>.'.^i/-'ZD15-

ar subordinated debi.

rued tate variable rate

Total lone-term debt[IM]

Long-term beneficiaJ interests. Fixed rate V41 table ra

1 5,164 6,438 0 74-5 21%

f 12,766 6,211 0 98-7.87%

1.6]* 1.39-8.75%

1,962 0 39-5 *4%

3.252 0 33-8 7b%

16,358 0 00-IS 94%

I 26.1BO

SS,I49

Hon-U.S nllices

I 11.42* j 112.610

At December 31. 2016, the maturities ol interest-bearing time deposits were as follows

I,"fe**!^rlVf!"SVJ

^Viotii

1 31 531% S4 S461 86.377

2020 2021

4.4331764.609

2,066682 134

2.00S392 044

3.9U1S84 176

1.BB9 : 3.889

t 47,01.'t L5.317j 103.220

2.710

S 11.JS*

30.557

f 11.602

t 1V.047

ta) Ihe interest rates shown are ihe range ol contractual rales m effect ai Deteniber 31 2016 and 201S. respectively, includingnon u.S dullar f;ied and varuMe-rate issuances. »ftich eidudes 'If effects ol (he ittocnied <]eft**:tw im.'rumenfi t--s«f in hedge accourrtMgi-riatMnshr.is, rf apphcaUc The use of ttvse derrvative inst:umtfits mod-lies the Finn's eijwsure to the contractual interest rales disclosed in ihe table above including the efteas ol !he tedfjuccountingdeiivatives, the range of modifediates in effect ai Decrmt«i 31. 2016. lo> total long-term debt was (0 iB)%toA8S% versus the con'.ractual range 0! 0 00% to 8 75% presented m :I« table above The interest ixte ranges shown exclude structured notes arcounied lor at fan value.

lb) included long term deo: of (82 ? billion and 17o 6 Miionsecuied by assets totaling 1205 6 billion and 1171 6 bilkm at December 31. ZOio and 2015 resnectnrlv The amouni of lung-term debt secured by assets dors not include amounts related to hybrid instruments.

lc) Included (37 7 hiffwn andf]i I diffiun o(lone lermctob! accountrrf to arfau value 41 December 1 (. JO Id ana ZOIS. respethvrty

(d) Included }7 S billion and 15 5 billion of outstanding zero-coupon notes al rx-cemtier 31, 2016 and 2015 respntrvely Hit iggretaie pnncipal amouni of these notes at their lespecliue mat unties is 125 1 billion and 116 2 billion, resoectivelv The lixresate principal amount reflects the contractual principal payment a: maturity, which may exceed the contractual principal payment at the Firm's ncil call date, if applicable.

te) Included on thp Consolidated balance sheets inbenefiCJil interests issued by consolidated VIEs. Also included 1120 million and (787 million accounted tn at fan value at Oecember 31 2016 and -?015 respectively r(eluded short-term commercial paper and Other chorl tern beneficial interests 0! li J billion and (11 3 biffuna: December 31.2U16 and 2010, lespectivefy

(fl Ai December 11.2016. loug ipm debt in tne aggregate ol IS) 8 billion was icdermablea: the upton ot jpttorgan Chase, in whole or in part, one* to maturity, based on the terms specified in :he respective msliuments.

(g) The acgregale carrying values ol debt that inatun-s in each of the five years subsequrni lo 2016 is 146 7 billion in 2017, (49 4 billion in 2018. (J2 1 billion 111 2019. (33 8 billion iii 2020 and (30 6 In l iion in 20Zl

IPMorgan Cluse A Co7201ft Annual Renon

Notes to consolidated financial statements

ifi? vw!M»mt"J .jvorage rmu'a: iiui imprest rales fm jn;a' ibng-ie-n ficni excluding siruriurec noies accounted lor a: Uir vaijp were 2 49% and 2 3fl% as of necembei 31 20id and JO) 5. respecilvely in order io mndily exbosu-e it) mieresi rate and currency exchange rate movements. J° Uorg;ili Chase utilizes derivative msiruments. primarily mteresi raie and cross-currency unci est rate swaps m conjunction witli some ol its deht issues The use of these instruments modifies Ihe Firm s interest expense on me associated deht The modihed weighted-average interest rales tor total long-term debt, including the effects ol related derivative instruments, were 2 01 lb and 1 64% as of December 31. 2016 and 2015. respectively

IPMorgan Chase S Co has guaranteed cenain long-term debt of us subsidiaries, including both long-term debt and structured notes These guarantees rank on parity with the Firm's other unsecured and unsubordinated indebtedness The amouni ot such guaranteed long-term deht and stiucturcd notes was (3.9 billion and 1152 million at December 31, 2016 and 2015, respectively

The rirm's unsecured debt does not contain requirements thai would call for an acceleration of payments, maturities Ol changes in ihe structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in Che Firm's credit ratings, financial ratios, earnings or stock price

Junior subordinated deft'rable interest debentures held by trusts that issued guaranteed capital debt securities At December 31 2016. the Firm had outstanding eight wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued trust preferred securities

I he junior subordinated deferrable mleiesi debentures issued bv the rirm to the issuer irusis. totaling 12 3 billion and 0 billion ai December 31. 2016 and 2015. respectively, were reflected on ihe Firm's Consolidated balance sheets in long-term debt, and in the table on ihe preceding page under Ihe caption 'Junior subordinated debc" The firm a'so records (he common capital securities issued by the issuer trusts in other assets in its Consolidated balance sheets at December 31. 2016 and 2015 Beginning in 2014. the debentures issued to the issuer trusts bv the Firm, less ihe common capital securities of the issuer trusts, began being phased out lrom inclusion as Tier I capital under Basel in and they were fully phased out as of December 31. 2016 AsofOprember 31, 2015,1992 million of these debentures qualified as tier l capital, as of December 31. 2016 and 2015. Jl 4 billion and (3 0 billion, respectively, qualified as Tier 2 capital

The Firm redeemed (1.6 billion and (1.5 billion of trust preferred securities in the years ended December 31, 2016 and 2015. respectively

Note 22 - Preferred stock

At Dciembei 31 201c and .'0! li FMcuj^vi t'nasl; *.is authored io issue 200 million shaies o* pr^ienecl stock m Jl'Mtirgan Chases prefened stock then outstanding takes one or moM- senes with a pa- value ot SI pei share

ir me event a' a liquidation or dissolution ol the Fum, piecedence ovei the '-irm's common siock with respect to the payment o' dividends and me distribution ol assets

Contractual l4tr
in effect K December 31.

The following is j s-.immary of IPMorgan C liases non rumulj-.ivc ;irc1erred Sloe*, outstanding as of Oecember 31. 2016 and 2015

Curvet
wtikti Floating AwJrod annual

8/27/2012

z/s/ron

1/30/201* H/2.V20l4 2/12/201S 6/4/2011 7/Z9/201S

4/21/2008 4/23/2013 //29/2011 1/22/2014 3/10/20H 6/9/20l*

125.7SO 40.000

ii soo

MOW 143.000 142 SOO 11 S.000

600.000

iso oon

150.000 200.000 100.000 2SO.OO0 I MX 000 700.000

*Calfylf value t: December J1 2016 and *0l5 tin millions) issue it:t*

1/1/2017 NA HA

Series* SenesY Series 4*

3/1/2018 HA NA

3/1/2010 NA NA

6 100 * 150

7 tOO%

5 ISO 6.OO0

W20J9 NA N4

3/1/2020 NA NA

9/1/2020 NA NA

9/1/2020 NA NA

1 SOO

2.000 1.000

2 SOO

Series H Series s Series u

Set l

4/30/2018 4/30/2018 LIBOR-3*7%

1/1/2021 8/1/2021 2/1/2024

5/1/2023 8/l/20Z3 2/1/2024

4/10/2024 4/30/207* 7/1/201* JtVl/702* S/l/2020

7/1/201° 10/V202* 5/1/2020

llnOH • 3 25 LI90K ■ 1 JO L1U0R • 3 78 LIBOR' 3 31 LIBOfl • 3 32 IJBORO 33 LIBOR ' 3 no

Tolal preferred stock

Total preferred stock

(a) Rcpresewedbydeposraitsliarrt.

Each scries of preferred stock has a liquidation value and redemption price per share of 110.000. plus accrued but unpaid dividends

Dividends on fixed-rate preferred stock are payable quarterly Dividends on fued-to-tluating-raie preferred stock are payable semiannually while al a I iced rate, and become payable quarterly after convening to a boating rale.

Redemption rights

Each series of the rirm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date lor that series All outstanding preferred stock series except Series I may also be redeemed lollowmg a 'capital treatmenl event', as described m the terms ol each series Any redompnon ol the firm's preferred stork is subiect to non-objection Irom the Board of Governors of the Federal Reserve Sysiem (the "Federal Heserve")

Note 23 - Common stock

At December 31. 2016 and 2015, JPMorgan Chase was authorized to issue 9 0 billion shares of common stock witl a pai va'ue of (1 per share

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during [he years ended Oecember 31. 2016. 2015 and 2014 were as follows

Te*eno>dDecember3L .. = .■:" . (wmritom)..- ;;' ■ . ■" , r. ' ' 201" ■ -.r 2015 Vi .-"7"»			
Total nsged - balance al lanuary 1	4.104 9	4.104 9	4.104 9
Treasury - balance at January 1	(4414)	(3901)	(148 8)
Purchase ottreaswY stock	(1404)	(89 8)	182 3l
employee benefits and compensation plans	Z6 0	17 8	39 8
warrant elercise	111		4 7
employee smck uul chase plans	1 01 0	1 2	
Total issued Irem treasury			
Total treasury • balance al			
Outstanding il December 11			

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Notes to consolidated financial statements

At December 31. 2016. 2015, and 2014. respectively, the Firm had 24 9 million, 47 4 million and 59 8 million warrants outstanding to purchase Shares of common stock (the "warrants") The warrants are currently traded on the Mew York Stock Exchange, and (hey are exercisable, in whole or in part, at any time and from time to time until October 28. 2018 The original warrant exercise price was (42 42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon Ihe occurrence of certain events, including, hul not limited to, [he extent to which regular quarterly cash dividends exceed (0.38 per share As a result ol the Firm's quarterly common stock dividend exceeding (0 38 per share commencing with the second quarter of 2014, the exercise price of the Warrants has been adjusted each subsequent quarter As of December 31. 2016 the exercise price was (42 073 and trie warrant share number was 1.01 On June 29,2016, in conjunction with the Federal Reserve's release of its 2016 CCAR results, the Firm's Board of Directors authorized a (10 6 billion common equity (i.e . common stock and warrants) repurchase program As of December 31. 2016, (6 1 billion (on a settlemeni-date basts) of authorized repurchase capacity remained under the program This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31. 2016, 2015 and 2014. on a settlement-date basis There were no warrants repurchased during the years ended December 31. 2016, 2015 and 2014

7earendedlexeeal^il.C"Yaolf > -T.701S;			
¹~m" rolal number of shares of common stock repurchased	1*0*	89 8	82 3
Agireeale purchase nn of common Stack repunruises	l 9.017	1 S 616	1 4.760

The firm may. Irom time to time, enter into written trading Plans under Rule] Ofj5-1 of the Securities exchange Act of 1934 to facilitate repurchases in accordance with the Common equity repurchase program A Rule 10b5-1 repurchase plan allows ttie Firm lo repurchase its equity during periods when it would not ui her wise be repurchasing common equity - lor example, during internal trading "blackout periods ' All purchases under a Rule 10b5-i plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II. Item 5 Market tor registrant's common equity, related stockholder matters and issuer purchases of equity Securities, on page 22

As of December 31, 2016, approximately 154 million Shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock Purchase plans, director compensation plans, and the Warrants

Note 24 - Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting penod on a basis equivalent to the dividends paid to holders ol common stock; these unvested awards meet the definition of participating securities.

The following table presents the calculation of basic and diluted EPS foi the years ended December 31. 2016. 2015 and 2014.

It-VmflCr^^T^icr Basic eananfS per share

t 24.731 1 24.442 % 21.745

▷47 1.515 1.125

Less. Preferred stuck dividends

Net income appticaalt to common equity

Less. Dividends and undistributed earnings allocated to participating securities

1 22,513 1 27,406 1 20.077

1.418.5 3.700 4 1.7615

1 «.24 l 6 05 1 S 13

Diluted earnings per share. Net income applicable to common

1 22,581 1 2Z.406 1 20,077

1.61B..S 1.700 4 1.763 5

.(Out 'iecll

11.1 12 4 14 0

1,649.1 3,732 8 3.797 5

Net Income per share

■d tram lne cunpuianon of diktet r l

bent'H plans The acjrtf 201tand«"ie 1 milkjn In the tear Harmed CPs usee the m the

melho" aithuconv.ju"j:iol

Note 25 - Accumulated other comprehensive income/floss)

AOCI includes the after-tax change m unrealized gams and losses on investment securities, foreign currency translation adjustments {including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/fcredit) related to the Firm's defined benefit pension and Ot'FB plans

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^AfaHrwUled't.

: coenptehefsfve i '" hv-otne/(loss)^

tear ended Oexeintvw'IV^,

Effectrve January l, 2016. the nrm adopted new accounting guidance related to the recognition and measurement of financial liabilities where the fair value option has been elected This guidance requires the portion of Ihe total change in fair value caused by changes in the Firm's own credit risk ("DVA") to be presented separately in OCI. previously these amounts were recognized in net income The guidance was required to tie applied as of the beginning ol the fiscal year of adoption by means of a cumulative effect adjustment to the Consolidated balance sheets, which resulted in a reclassification from retained earnings to AOCI

(1.324) (1.018)

■ |»inVllossK)S-f." IranstallDiij-f-.r,;:. L'-C*^ O ":^-^r.-Ufl^SsV- Of--" " » ;ceiln"esimer<.iiiii 4dje«iT»fT"^A

- - - l of hedges [vn hedges ^.-aS^and OPCB plans -y.-.;;

Balance at December 31, 2011 l 2.791

Metchatvee 1.9/5

Balance at December 31. 201S

Cumulatrre effect ol change in accounting principle

Net change

Balance at December Jl. lon $ 1.52*

mlrad unrtnlnH cans art losses related

mired unrealized gains and losses related

Innj:lnrdiost ol mwevs »«oun(td lv as AFS, mcUmg «e
The following table presents the pre-tax and aflor-tax changes in the components of OCI

»". eTirct -»>' Aher-to" Pre ta» effect ^"««^r
(l 6i5) 1,698

1(3315) 1 1.2V7 1 (2 011) 1 3.193 1 (1.170) 1 :.0.

(?02) 76 (126) (771 29 l■

Translation adjustments translated"
(56) Bl (37)
Hedges**

Nll change
(366) 1*5 (271)
Oefinid benefit pernios and opep plans. Pnor service rretilis ariung during tne perm Hel iJimAlosses) arising durinx the penod Keclassiliralion adiusl.-nents meluded in nel

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SMtktnent kjis/(((lri)
930 1(1.521) 113117) 11170 1(1.997) 11167 % (577) 1 090
■et change
DVA on (air value eptew elacitd liabilities, nel change: 1 (529) 1 19* 1 (110) 1
i a-vj irwied "rogn an repair* ll di:"t rcomtftip
Total other romprehensivt income/dost l

i) The nre ui iimm it mwirt in lecurmrs m th" ConsoUam l) ■eclauliiralBnS ol jie--j< raaas4 pim/(lhits) on transiMm adji
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warmer", (ash tk»s irili rot ocv.l fw aednnul iririaation. sir no

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Notes to consolidated financial statements

Mote 26 - Income taxes

JPMorgan Chase and us eligible sulKifl-.aries f«e a consolidated ll S lederal income tax leiurn Jf'MOigan Chase iisps ;ne asset and liability meibod lo piuvide income taxe[1]. on ail iransjctions recoided m the Consolidated financial Siaiemews This memotl sennirr-'S lhat income taxes rebec t the expecied future ta< consequences ol temporary differences between the carrying amounis ol assets or liabilities lor book and tai pin poses Accordingly, a delerred tax asset or liability fot each temporary difference is determined cased on the tax rates thai lhe F irm expects to he in effect wfien ihe underlying items ot income and expense are realized lPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense A valuation allowance is established to reduce delerred tax assets to the amount the Firm experts to realize

Due to the inherent complexities arising from the nature ot the rirm's businesses, and fiom conducting business and being taxed in a substantial number of jurisdictions, significant |udgments and estimaies arc required to be made. Agreement nf tax liabilities betwepn JPUorgan chase and the many tax lunsdictions in which the Tirm files tax returns may not be finalized for several years Thus, the Fum's final iax-related assets and liabilities may ultimately be different from those currently reported

Effective lax rate and expense
A reconciliation ol the applicable statutory U.S. income tax rate to the elteciive tax rate for each of the years ended December 31. 2016, 2015 and 2014. is presented in (he lollowmg (able

effective tax rate
U S siatr and local income il«s. net or Ci S. federal income tai benefit
tai-eiempt income
Non-U.S. subudiary earruncs**
Business tai credits
Nondeductible legal expense
iix«ud:t resoiiriuns
(1.1)
(IT) (19)
(19) (1 7)

51 Jimmy U S. lederal tai i
Effective ux rate

(1 1) (2(Q) (1 1)
(i)M
29 2%

me components ol mcome ta> expense/tbenefn) included in the Consolidaied statements ol income were as follows tor each o! the years enrted Decemher 31. 2016, 2015, and 2014
; 2 I JSI

income tax expense/tbenefit)

Current mrom* ux expense/!benefit)
US (Meral t 2.4** i 3 11

Deferred income Ui "<peme/< benefii I US ledml

j 9.101 H 6 260 S 19S4

Total income tax expense includes (55 million, 12 4 billion and $451 million of lax benefits recorded in 2016. 2015. and 2014, respectively, as a result of lax audit resolutions

Tax of lea of items recorded in stockholders' equity The preceding table does not relied the tax effect of cer (am items that are recorded each period directly in stockholders' equity The tax effect of all items recorded directly to stockholders' equity resulted in an increase of $925 million in 2016, an increase of Jl 5 billion in 2015. and a decrease ol $140 million tn 2014. Effective January I. 2016, (he Firm adopted new accounting guidance related to employee share-based payments As a result of the adoption of this new guidance, all excess tax benefits (including tax benefits from dividends or dividend equivalents) on share-based payment awards aie recognized within income tax expense in the Consolidated statements of income in prior years these tax benefits were recorded as increases to additional paid-in capital

Results from Non-U.S. earnings The following table presents the U.S and non-U.S components of income before income tax expense for the years ended December 31, 7016. 2015 and 2014.

i vear ended December Ji; l
a-.?.fey.^. ;.goi* yy 2Qis[I]ftj-f »»«:

S26.4S1 W1.191 121,422

7.145 7.511 7.277
tperae % 14,51* \ 10,702 % 30.6 99

OiigCi-rig tevn-.v nl :nt» ■iumii.ts rpri.n-ennuis .i.ic ; j.-iij jl needs ui its non-u S snt'S'd a-ies unwiined w.:l me formation ol stieri?it s:',i;-i:ies and stens i.ii-ei fi.- i-.iHiN these requirements and need; the firm has (l^ermmea lhat tne undistributed earrings ol lertain o' us subsidiaries would tie indelinuelv reinvested to lund anient and luture giowtn ol ihe related businesses As nia.iaii'rmcini does nm intend to use tne earnings ol these subsidiaries as a sou-re ot funding lor us ll S opt-rations such earnings will nui be disiributed to the u s m the lo'eseeaale future Fm 2C16. pretax earnings ol S3 8 billion were gmipraied and will be indelimiply reinvpwrj in lhese sufjsutyiies ai December 31 2016. the cumulative amnuni of undistnbuied pretai earnings m these subsidianes were $38 4 biihon if the Firm were to moid a deterred tax liability associated with these undisinbulpti earnings, the amount would be $8 8 billion at Decembei 31. 2016.

these undismbuted earnings are related to suhsidianes located predominantly m the u K where the 2016 lax rate was 26%

Affordable housing tax credits
The Firm recognized (J. 7 billion $] i> billion and 11 6 billion ol ta< credits and other ;a» benefits associated with investment in affordable housing projects within income tax expense for the years 2016. 2015 and 2014 respectively ihe amount ol amoi iizanon of such mvesimenis reported in income lax expense under tht> current penod presentation during these years was $1.2 biihon, $1 l billion and $1 l billion, respectivply The carrying value ol these investments, which are reportPd in other assets on the Firm's Consolidated balance sheets was $8.8 billion and $7 7 billion at December 31, 2016 and 20J 5. respectively The amouni ol commiimenis related to these investments, which are reported m accounts payable and other liabilities on the Firm's Consolidated balance sheets, was $2 8 billion and $2 0 billion at December 31. 2016 and 2015. lespectively

Deferred taxes
2014
2015

Deieirc-d income ta< eocnse/ihenefii) i-.-sulis l.'om differences between asseis and liabilities nieasu'td for fin.mt.al reporting purposes veisus income tax return pin noses Deterred lax asseis arp reiognized il in maii.igempin s ludiimcni. lheir readability 15 determined 10 !)■.■ moie likely than not if a deferred tax asset is determined to be unrealizable, a valuation allowance is established The sigmlicanl components ol deferred tax asset5 and liabiUies are reflet led in the lollowmg table as of December 31. 2016 and 201 5

Deremher 31. (in rrullKaiS)'
6.811 5.164
2.1SS
Deterred l4x assets Allowance tor loan losses tmpiovee bi"ne(i:s
7 799 5.305 2.602
Cross deferred ui assets

Gross deferred ui assets
vaiua;«n allowance
4.577 5.493
s. nei of valuation
Nei dekiiedll
(70S) t

.ismg transaclior
frost deferred tai liabilities
1 (fiabiiitiesl/assets

JPUorgan Chase has retorded deferred tax assets 0/ $2.2 billion at December 31. 2016. in connection with ll S lederal and non-U.S NOL carryforwards and foreign tax credit carryforwards At December 31, 2016. total U.S federal SOL carryforwards were approximately $3.8 billion and non-U 5 NOL carryforwards were $142 million, if not uliliied, the U.S federal NOL carryforwards will expire between 2025 and 2036 and Ihe non-U.S. NOL carryforwards will expire in 2017 Foreign tax credit carryforwards were $776 million and will expire between 2022 and 2026

The valuation allowance al December 31, 2016, was due to losses associated with non-u 5 subsidianes

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time Based on JPUorgan Chase's

Notes to consolidated financial statements

Unrecognized tax benefits

At December 31. 2016, 2015 and 2014, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $3 5 billion, $3.5 billion and $4 9 billion, respectively, of which $2 6 billion, $2 l billion and $ 3 5 billion, respectively, if recognized, would reduce the annual eflecttvc tax rate. Included in the amount of Unrecognized tax benefits are certain items that would not aflect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income Tax deductions, ind the portion of gross non-U 5. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit hy a number of taxing authorities, most notably by the Internal Revenue Service as Summarized in the Tax examination status table below As JPMorgan Chase 15 presently under audit by a number of taxing authorities, it is reasonably possible that over the next 12 months the resolution of these examinations may increase or decrease the gross balance of unrecognized tax benefits by as much as $800 million Upon settlement of an audit, Che change in (he unrecognized Lax benefit would result from payment or income statement recognition

The following table presents a reconciliation of the beginning and ending amouni of unrecognized tax benefits for the years ended December 31, 2016, 2015 and 2014

1*2
408

% 1.497 1 4,911 $ 5,515

(10

ill1.02A477

(785)(2.646)(1.902)

(56)(204)(9)

(51)
% 1,450 t 1.497 l 4.911

After-tax interest expense/tbenefit) and penalties related to income tax liabilities recognized in income tax expense were $86 million. $(156) million and $17 million in 2016, 201S and 2014, respectively

At December 31. 2016 and 201S. in addition to the liability for unrecognized tax benefits, the Firm had accrued $687 million and $578 million, respectively, for income lax-related interest and penalties

Tax examination status

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many state and local jurisdictions throughout the U S The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31. 2016

jpuortan Cruise - u.s

At Appellate level

2011 - 2011 2008 - 2011 2008 - 2011 2011-2012

fieId elimination of amended returns, terrain matters at Appellate level

Field examination

Field t kirn nation

field Examination

Fdd [lamination

Note 27 - Restrictions on cash and intercompany funds transfers

The business of JPUorgan Chase Dank, National Association ("JPMorgan Chase Bank, N A ') is subject to examination and regulation by (he OCC The Bank 15 a member of the u 5 Federal Reserve System, and its deposits in ihe u.S are insured by the FDIC, subject to applicable limits The Federal Reserve requires depository uisttlulinns to maintain cash reserves with a Federal Reserve Dank The average required amount of reserve balances deposited by Ihe Firm's bank subsidiaries with various Federal Reserve Banks was approximately $19 3 billion and $14 4 billion in 2016 and 2035, respectively

Restrictions imposed by U 5 federal law prohibit IPMorgan Chase & Co ("Paieni Company") and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to (tie Parent Company or to any particular affiliate, together with certain other transactions with such affiliate, (collectively referred to as "covered transactions'), aiP generally limited to 3 0% of the banking subsidiary's total capital, as determined by the nsk-based capital guidelines, the aggregate amount of coveted transactions between any banking subsidiary and al) ot its affiliates is limned to 20% or the banking subsidiary's loial capital

Pnor to the establishment of the IHC in the fourth quarter of 2016. the principal sources of the Parent Company's income were dividends and interest from the various bank and non-bank subsidiaries of the Firm, the principal source of the Parent Company's income, commencing with Ihe fourth quarter, will be dividends from the IHC and JPMorgan Chase Bank. N A , the two principal subsidiaries of the Parent Company In addition to dividend restrictions set forth in statutes and regulations, the federal Reserve, the OCC and the rDiC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment ol a dividend would constitute an unsafe or unsound practice m light ol the linanciai condition of the banking organization

At January 1, 2017. JPMorgan Chase's banking subsidiaries could pay. in the aggregate, approximately $20 hillion in dividends to their respective bank holding companies without the prior approval ol their relevant hanking regulators The capacity lo pay dividends in 2017 will he supplemented by the banking subsidiaries' earnings during 1 lie year

fn compliance with rules and regulations established by U S and non-U.S regulators, as ol December 31. 2016 and 2015. cash in I lie amount of $13 4 billion and $13 .2 \ billion, respectively, were segregated in special bank accounts tor the benefit of securities and lutures brokerage customers Also, as of Oecember 31. 2016 and 20)5. the Firm had receivables within other assets of $ 16 1 billion

and $15 6 billion, respectively, consisting of cash deposited with clearing organizations for the benefit of customers. Securities with a fair value of $19.3 billion and $20.0 billion, respectively, were also restricted in relation to customer activity in addition, as of December 31, 2016 and 2015, the Firm had other restricted cash of $3 6 billion and $3 l billion, respectively, primarily representing cash reserves held at non-u.S central banks and held for other geneial purposes Prior period amounts for segregated cash, receivables within other assets, and other restricted cash have been revised to conform with the current period presentation

Note 28 - Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company The OCC establishes similar minimum capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A and Chase Bank USA, K A.

Capital rules under Basel ill establish minimum capital ratios and overall capital adequacy standards for large and infer nationally active U 5 bank holding companies and banks, including the Firm and its IDI subsidiaries. Basel III presents two comprehensive methodologies for calculating RWA. a genera! (standardized) approach ("Basel ill Standardized") and an advanced approach ("Basel ill Advanced") Certain of the requirements of Basel III are subject (0 phase-in periods lhat began on January 1, 2014 and continue through the end ol 2018 ("transitional period")

there arc three categories ot risk-based capital under (he Basel ill Transitional rules CETl capital, as well as Tier 1 capital and Tier 2 capital. CETl capital predominantly includes common stockholders' equity (including capital for AOCI related lo debt and equity securities classified as AFS as well as for defined-benefit pension and OPEB plans), less certain deductions for goodwill. MSRs and deferred tax assets Dial arise from WOL and tax rrpdH carryforwards Tier l capital predominantly consists of CFT1 capital as well as perpetual pieferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses lotal capital is Tier] capital plus Tier 2 capital.

Notes to consolidated financial statements

The lollowmg tables present me reg-jiaiory carinal assets rinrJ nsi-iiditd capital ratios (or ^Morgan Chase and «s significant national hank sub=>iclia"-es under hotf. Basel in Standardized iransuional and Basel in Advanced Transitional at December 31 2016 and 2015

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(.til CAPKJI	f 179,11*	% lit 817t	171.111
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tMalCMMI	1*1.441	113.267.	1M..JI
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(a) Adjusted average asttts. foi putpuses of caiculaiini iht r«tr L iner age lain, Includes tail quaitcriv average assets adiuueti loi unreahred ea>ns/(lostes) on Ars securities, less etdurwrit tor loodwll and oihei intangible iisem. defined level* ornton plan isseu. and deterred in mm related to NOL and ta< crtdit cir rylorwards.

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Note Rating agencet atkw measures erf capital to be adjustrd upward lor deferred iii liabilities, which have ivsulitd I mm both non taiabkr bwsinns combinations and Irom ta>-deductible gnrxfwui. iht fum had derrrad lai liaMiies rruMaiz kom nen-lauble fusmeii cornotnalmns 01113 million and 1105 million al December 11.2016 and 2015, respectively and deferred Ui liahiiiliei retukinf. Ircm tai deductible goodwill 0f 111 tulimn and 13 0 billui at December 11 2014. and 2015, rewecl»ehr

Under the risk-based capital guidelines ot the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CETl. Tier l and Total capital to rwa. as well as a minimum leverage ratio (which is defined as Tier l capital divided by adjusted quarterly average assets) Failure to meet these minimum requirements could cause the Federal Reserve to take action National bank subsidiaries also are subject to these capital requirements by their respective primary regulators

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As of December 31. 2016 and 201 5. JPMorgan Chase and all ol us banking subsidiaries were well-capitalized and met all capital requirements to which each was subject

Note 29 - Off-balance sheer lending-related financial instruments, guarantees, and other commitments

JPUtirgan Chase provides iending rela:ed imancial insnuments (e g. commitments and [;uaiantecs) to meet the financing needs of us cusiomeis The contractual amount nl these financial instiuments represents lhe maximum possible ciedit risk to the Firm should the louine-pa-ty draw upon the commilmeni oi the Firm be required to lulfill its obligation under the guarantee, and should ihe counterparty subsequently fail to perform according to the terms ol the contract Most of these commitments and guarantees are refinanced, extended cancelled, or expire wilhoui hemg drawn or a delault occurring As a result, toe total contractual amount of these instruments is nut in the Firm's view, representative of its actual luiure credit exposure or funding requirements

To provide lor probable credit losses inherent in wholesale and certain consumer lending-commitments. an allowance for credit losses on lending-related commitments is maintained Sec Note 1 b lor further information regarding the allowance for credit losses on lending-related commitments The lollowmg table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31. 2016 and 2015 The amounts in the table below for credit card and home equity lendmg-rclaicd commitments represent the total available credit lor these products The Firm has not experienced, and does not anticipate, that all available lines of credit lor these products will be utilized at the '.arne time The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due The nrm may reduce or close HFLOCs when there are significant decreases in the value of (he underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

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Notes to consolidated financial statements

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11.74S 7.807 11,485
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Total consumer, eiduding aedit card
Jotal

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cum ws lendiiv/ collaltral consist d prinirilt cith ind SK-jrities istued bt gonrnmtnti thai are members of (he orprrjlion lot crnnunc Co operiton nt ("WCin l:nr U.S goverrvnent igencies.
(fl At December 11. ZOloand 7015. included wifuniltd (Owniilntnts al 144 million and 150 mitlen, respKliwlv to third-party prrvali «u*T 'andi. ine 1L.0 Man ino 1171 nil ion, respectnelt toMhcr eqjm investmeMi. lhese comnlmenti eKiudec 134 million ind 171 mJlion. reieectrveli. related :o iMstrntnit thain geneiaHt Ui valuta it ntt issei vakit at discussed m Note) Ui addition, al OecemMt Jl. 2016 and 201S included lexers c4 crtdn htdged btOtnvaiivt Iransacucnt Mid maiuftd on (martet rttl basis o! 14 6 hillnn ind 14 6 tillen. resoedmlT
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Other unfunded commitments to extend credit Other unfunded commitments to extend credit generally consist of commitments lor working capital and general corporate purposes, extensions ol credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

The Firm acts as a settlement and custody bank in the U S tn-party repurchase transaction market in its role as settlement and custody bank, the Firm is exposed lo the intra-day credit risk ol its cash borrower clients, usually broker-dealers This exposure arises under secured clearance advance facilities that the Firm extends to its clients (i e cash borrowers), these facilities contractually limit the Fum's infra-day credit risk to the facility amount and must he repaid by the end of the day As of December 31, 2016 and 2015. fbe secured clearance advance facility maximum outstanding commitment amount was 12 4 billion and 12 9 billion, respeciively

Guarantees
U s GAAP requires char, a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fan value of the obligation undertaken in issuing the guarantee U S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon (a) changes in an underlying asset, liability or equity security of the guaranteed party, or (b) a third party's failure lo perform under a specified agreement The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U S GAAP standby letters of credit and other financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts

As required by U S. GAAP, the Firm initially records guarantees at the inception dale fair value of the obligation
assumed (e.g.. the amount of consideration received or the nel present value of the premium receivable). For certain types ol guarantees, the Firm records this (air value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and ihe fair value of the liability recorded at inception is amortized into mcome as lending and deposu-related fees over the lite of the guarantee contract Tor indemnifications provided in sales agreements, a portion of (he sale proceeds is allocated to the guarantee, which adjusts the gam or loss that would otherwise result from the transaction For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e. over time or when the indemnification expires) Any contingent liability lhat exists as a result of issuing (he guarantee or indemnification is recognized when it becomes probable and reasonably estimable The contingent portion of the liability is noi recognized it the estimated amount rs less than the carrying amount or the liability recognized at inception (adjusted for any amortization) The recorded amounts of the liabilities related to guarantees and indemnifications al December 31. 2016 and 2015, excluding the allowance lor credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees Stand hy letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the perlormance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were J588 million and $550 million at December 31. 2016 and 2015. respectively, which were classified in accounts payable and other liabilities on Ihe Consolidated balance sheets, these carrying values included $147 million and $123 million, respeciively, for the allowance for lending-related commitments, and (441 million and $427 million, respectively. For Ihe guarantee liability and corresponding asset

Investment ettar"
Homnvesimem trade"*
Total contractual amount
Allowance tor lending-1elated commitments
Guarami-e liability
28,245 7.702
31.751 7,182

Commitments with collateral (i) rhe rat«ci teak n bisrd on Iht Fan's mmul ra

IPUorgan Chase £ Co./20i6 Annual Re.wn

Notes to con so 11 dated financial statements

Securities lending indemnifications TiirougM the farm's securities tending [liofjram cusiomeis" securities via custodial and non-custodial arrangements, mav l>e lent to ihird parties as pan ol ilus urogram, the Firm provides an indemnification m the lending agreements which protects tne lender agamst the failure ol the Dor rower to remm trie lent securities To minimize us liability under these indemnification agreements, the f irm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value ol the securities on loan Irom the borrower Collateral is maikcd to market daily lo help assure that collaieralizanon is adequate Additional collateral is called from the borrower if a shortfall exists, ot collateral may be released lo the borrower in the event of overcollateiealization H * borrower defaults the Firm would use the collateral held to purchase replacement secur mips in the market or to credit the lending customer with ihe cash equivalent thereof Dcrivatives qualifying as guarantees The nrm transacts certain derivative contracts that have the characteristics of a guarantee under u S GAAP These contracts include wntten put options that require the Fum fo Purchase assets upon exercise by the ophon holder at a specified pnee bv a specified date in the future The Firm may enter into written put option contracts m order to meet diem needs, or for other trading purposes The terms of written put options are typically five years or less Derivatives deemed to be guarantees also include contracts such as stahle value derivatives that require the Firm lo make a payment of the difference between (he market value and the book value of a counterparty's reference portfolio of assets in the event lhat market value is less than book value and certain other conditions have been met stable value derivatives, commonly relerred to as 'stable value wraps.' are transacted m order lo allow investors to realize investment returns with less volatility than an unprotected ponlolio and are typically longer-term or may have no stated maturity, but allow the Firm to elect to terminate the contract under certain conditions Derivatives deemed to be guarantees are recorded on the Consolidated balance sheets at (air value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was (5? o billion and $53 a billion at Oecember 31. 2016 and 201 5. respectively The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of Ihe notional amount, the notional amount on these stable value contracts was $28.7 billion and $28 a billion at December 31, 2016 and 2015, respectively, and the maximum exposure to loss was $3 0 billion at both December 31. 2016 and 2015 The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract The lair value related to derivatives that the Firm deems to be guarantees were derivative payables of $96 million and $236 million and derivative receivables of $16 million and $14 million at December 31. 2016 and 2015. respectively Thf nrm reduces exposures to these contracts by entering into offsetting trausacnons. or bv entering into contracts that hedge Ihe markei risk ielaied to the derivative guarantees

tn addition to derivative contracts that meet the characteristics of a guarantee, Che Firm is boih a purchaser and seller of credit protection m die credit derivatives market Foi a further discussion of credit derivatives, see Note 6

Unsettled reverse repurchase and securities borrowing agreements, and unsettled repurchase and securities lending agreements
in the normal course of business, the rirm enters into reverse repurchase agreements and securities borrowing agreements, which are secured financing agreements Such agreements settle at a future date At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty The Firm also enters into repurchase agreements and securities lending agreements At settlement, these commitments result in the Tirm receiving cash from and providing securities collaieial to the counterparty These agreements gene'al1y do not meet the definition of a

derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date These agreements predominantly consist of agreements with regular-way settlement periods For a further discussion of securities purchased under resale agreements and securities borrowed, and securities sold under repurchase agreements and securities loaned, see Note 13

Loan sales- and securitization-related indemnifications Mortgage repurchase liability In connection with the Firm's mortgage loan sale and securitization activities with GSEs, as described in Note 16, the Firm has made representations and warranties that the loans sold meet certain requirements that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser Further, although the Firm's securitizations are predominantly nonrecourse, the Firm does provide recourse servicing in certain limited cases where it agrees to share credit risk with the owner of the mortgage loans To the extent lhai repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically wifl have the right io seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans lhat are deemed to have defects that were sold to purchasers (including secuntizat ion-related SPCsj plus, m certain circumstances, accrued interest on such loans and certain expense

Private label securitizations
The liahiltty related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

For additional information regarding litigation, see Note 31.

JPUorgan Chase • Co/701 6 Annual Remit

Lojns sold win recourse
The Firm oruvicles serving fo: riioiTgafjes .i'ni c'ei cam commerrial tending prtmucts on uorh a recourse and nonrecourse Dasis In nonrecourse sei vicing the [lnntipji credit risA 10 the Finn :s ;ne rosi of temporary mm vicmg advances ol funds u e normal servicing advances) in rciouise servicing, me servicei agrees (o share ciedit nsk with the owner ot tne mortgage loans sum as Fannie Mae or Freddie Mac or a ofvate investor insurer nr guarantor Losses on recourse servicing predominantly occur when loreclosnre sales proceeds of ihe properly undeilving a def."tuned loan are less man the sum n! the outstanding principal baianre. plus accrued mi err est on the loan and the cost of holding and disposing ol tne untVMvmg property The Firm's seem itizations are predominantly nonrecourse (hereby effectively transferring (he ris* of future <mttt losses to the purinaser of the mortgage backed securities issued by the trust At DecMiiher 31, 2016 and 2015. the unpaid principal baianrt: of loans sole! with recourse loialea 12 7 billion and la 3 Dili,on. resoei lively The carrvmg value of the 1 elated liab,lily thai the i inn :1.1s recorded, which is representative ot the F irm s view ot tne likelihood it wilt have ro perform uniter ,ts reccwr;e odlriijiiorrs. was $64 million and $82 million at December 31. 2016 and 2015, respectively

Other off-balance sheet arrangements Indemnifies (ion agi cemenis - general in connection with !ssi!'i>i; securities tn investors, the Firm may enter into contractual anangements wuh ilnrd names lhai require ihe Fum to make a payment to ihem m the event of a change in ta> law or an adverse interpretation ot tax law In certain cases, the contract also mav include a termination clause, which would allow Ihe Firm to settle Ihe contract al its fair value in lieu of making a payment undei the indemnification clause The firm may also enter miu indemnification clauses m connection with the licensing of software to clients ("sodware licensees') or when it sells a business or assets to a third party ("ihird-p.11 ty purchasers"), pursuant to which it indemnifies software licensees for claims of liability 01 damages thai mav occur subsequent to the licensing ol the software, or ihird-party purchasers for losses they may incur due lo anions taken by the Firm prior to the sale of the business or assets it is difficult to estimate the rirm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes m tax law and future claims thai may be made against the Firm thai have not yet occurred Howevei. based on histoncal experience, management expects the risk of loss to be remote

Card charge-backs
Commerce Solutions. Card's merchant services business, is a global leader in payment processing and merchant acquiring

Under ihe rules of Visa USA, Inc., and MasteiCard International. IPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed card sales transaction that is the subject ol a dispute between a carclmember and a merchant tf a dispute ts resolved m (tie cardmember's favor. Commerce Solutions will (through the cardmember's

JPUorgan erase I Co/ZOlb Annual Report

issuing bank) cretin or relund (he amouni to lht card mem her and vit; charge hart, the transaction to the meichant il Commerce Solutions is unable to collect the amount Irom the merrhant. Commerce Solutions will bear trie loss for the amount credited or refunded to (he Ciirdmember Commerce Solutions mitigates this nsk by withholding future settlements, retaining cash reserve accounts or hy obtaining other security However, m the unlikely event thai (!) a merchant ceases operations and is unable to deliver products, services 01 a refund, (2) Commerce Solutions does not have sufficient collateral from ihe meichant to provide customer relunds and (3) Commerce Solutions does not have sullicienl linanciai resouices to provide customer refunds, JPUorgan Chase Bank, n A . would recognize the loss

Commerce Solutions incurred aggregate losses ol $85 million. $12 million, and $10 million on $1,063 4 billion. $949 3 billion, and $847 9 billion ol aggregate volume processed for Ihe years ended December 31. 2016, 2015 ano 20] 4, respectively Incurred losses from merchant charge-backs are charged to other expense, with the offset recorded in a valuation allowance against accrued interest and accounts receivable on the Consolidated balance sheets The carrying value of (he valuation allowance was $45 million and $20 million at December 31, 2016 and 2015. respectively, which the Firm believes, based on historical experience and the collaleral held by Commerce Solutions of 1125 million and $136 million at December 31. 2016 and 2015. respectively, is representative of the payment or performance risk to the Firm related to charge-backs Clearing Services - Client Credit Risk The Firm provides clearing services for clients by entering into securities purchases and sales and derivative transactions with CCPs. including FJTDs such as futures and options, as wet! as OiC-deared derivative contracts as a clearing member, the Firm stands behind the performance ol its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part there are two types o< margin variation margin is posted on a daily basis based on the value of clients' derivative contracts and initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for (he contract

as clearing member. lhe Firm is exposed to lhe risk of nonperformance hy its clients, but is not liable to clients for the performance of the CCPs Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement in the event of nonperformance by a client, the Firm would close out ihe client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member

Notes to consolidated financial statements

The Tirm reflects its exposure to nonperformance risk of the client through the recognition of margin payables or receivables to clients and CCPs: the clients' underlying securities or derivative contracts are not reflected in the Firm's Consolidated Financial Statements.

it is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes It is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes tor its own account and records in its Consolidated Financial Statements, see Note 6

Exchange & clearing House Memberships The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S and other countries, and it provides clearing services Membership in some of these organizations requires the Finn to pay a pro rata share of the losses incurred by the organization as a result of the default of another memher. Such obligations vary with different organizations These obligations may be limited lo members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as pan of (tie resources available to cover any losses in the event of a member default Alternatively, these obligations may include a pro rata share ol the residual losses after applying the guarantee fund Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses thai may result from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the First instance. It is difficult to estimate the Firm's maximum possible exposure undei these membership agreements, since this would require an assessment of future claims that may be made against the Tirm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote

Guarantees of subsidiaries
In the normal course of business, JPMorgan Chase & Co ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations ol its subsidianes on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations or (he subsidiaries are included on (he Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments, therefore, the Parent Company has noi recognized a separate liability for these guarantees The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including IPMorgan Chase Financial Company LLC ("JPUFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company These guarantees, which rank on a parity with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 256 of this Note. For additional mlormation. see Note 21

Note 30 - Commitments, pledged assets and collateral

Lease commitments
At December 31, 2016, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases lor premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements Certain leases contain renewal options or escalation clauses providing lor increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on ■eased premises No lease agreement imposes reslnruuns on the Firm's ability to pay dividends, engage in debt oi equity financing transactions or enter into further lease agreements

The following table presents required lulurc minimum rental payments under operating leases with noncancelable lease terms that expire altei December 31, 2016

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7017	t	1 508
Z01S 1.4/9		
701V		1 301
2020		1.151
2021	■ 885	
After 2021	3.701	
Total minimum payments required		lf) 115
Less. Sublease rentals under noncancelable subleases		(1.379)
m payment leouired		
2.255 (1831		

dost rental expense Sublease rental income Nel rental expense

Total rental expense was as follows

1.1160	(	2.015 1
(241)		(4IIJ
1.619	t	1.604 l

Pledged assets
101.1 174 9 151.0
The Tirm may pledge financial assets that il owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements, and to cover customer shon sales Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets At December 31. 2016 and 2015. the Firm had pledged assets of $441 9 billion and $385.6 billion, respectively, at Federal Reserve banks and FHLBs. in addition, as ol December 31, 2016 and 2015, the Firm had pledged $53 5 billion and $50 7 billion, respectively, of financial assets that may not be sold or repledged or otherwise used by the secured parlies Total assets pledged do not incftide assets of consolidated vies, these assets are used to settle the liabilities of those entities See Note 16 for additional information on assets and liabilities of consolidated vits For additional information on the Firm's securities financing activities and long-term debt, see Note 13 and Note 21, respectively The significant components of the Firm's pledged assets were as follows
Total *1

Decerri>T31.(inMliciiTtl ~*-;-.'r i-.-.-J . 1016 ..ZOIS-Stc unties
I ratline, assets and other
S 62t.O i 56/1

Collateral

At December 31. 2016 and 2015. the Tirm had accepted financial assets as collateral that it could sell or replcdge. deliver or otherwise use with a fair value of approximately $914 l billion and $748 5 billion, respectively This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $746 6 billion and 1580 9 billion, respectively, were sold, repledged. delivered or otherwise used Collateral was generally used under repurchase agreements, securities lending agreements or to cover customer short sales and to coJJareraJi7e deposits and derivative agreements

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Notes to consolidated financial statements

Mote 31 - Litigation

Contingencies

As of December 3l 2016. Hit; firm and ns subsidiaries and affiliates are rteltindants ot putative defendants in humorous ipgal proceedings including private civil htigatiom and regulaiory/govemmeni investigations The litigations range from individual actions involving a single plamtill to class acnon lawsuits with potentially millions of class members investigations involve Doth formal and informal proceedings, bv both governmental agencies and self-regulatory organizations These legal proceedings are at varying stages of adjudication, arbitration or in vesication, and involve each of the rirm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory anbtrusi. secunties and consume! proternon claims), some of which present novel legal theories

ihe Fum believes ihe estimate of (he aggregate range of reasonably possible losses, in excess ol reserves established, tor its legal proceedings is from (0 to approximately $30 billion al December 31, 2016 This estimated aggregate range ol reasonably possible losses was based upon currently available information for those proceedings m which the Tirm believes lhat an estimate of reasonably possible loss can be made For certain matters, ihe Firm does not believe that such an estimate can he made, as ol that date Ihe Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given the number, variety and varying stages of the proceedings (including the fad that many are in preliminary stages), the existence in many such pioceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresoived issues in many of the proceedings (including issues regarding class certification and ihe scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, including where Che Firm has made assumptions concerning future rulings by the court or other adjudicator, or ahoul the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect in addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote Accordingly, the Firm's estimate of the aggregate range ol reasonably possible losses will change Irom time to time, and actual losses may vary significantly

Set forth below are descriptions of the Firm's material legal proceedings

CIO Litigation The Firm has been sued in a consolidated shareholder class action, and in a consolidated putative class action brought under Ihe Employee Retirement income Security Act ("ERISA*), relating io 2012 losses in the synthetic credit portfolio formerly managed by the Firm's Chief investmenl Office ("00") A settlement of the

shareholder class action, undei which ihe Firm paid 11 50 million, has received full and final approval from [he Court The putative ERISA class action has been dismissed That dismissal was af'irmed bv the appellate court, and a rpquesi by Ihp pljmu/fs for rehearing by the lull appellate court was denied

Foreign t*change Investigations and Litigation ihe Firm previously reported settlements with certain government authorities relating to its foreign exchange ("IX") sales and trading activities and conuols related to those activities FX-relaied investigations and inquiries by government authorities, including competition authorities, are ongoing, and the Firm is cooperating with those matters in May 2015. the Fum pleaded guilty to a single violation ol federal antitrust law, and in January 2017. the Firm was sentenced, with judgment entered shortly thereafter The Department ot Labor granted the Firm a temporary one-year waiver, which was effective upon entry of judgment, to allow the F irm and its affiliates to continue to qualify for (he Qualified Professional Asset Manager exemption under ERISA The Firm's application for a lengthier exemption is pending Separately, in February 2017 the Soulh Africa Competition Commission announced thai K had referred Us TX investigation of the Firm and other banks lo the South Africa Competition Tribunal lo commence civil proceedings The Firm is also one or a number uf fui eign exchange dealers defending a class action filed in the United States District Court lor the Southern District of New York by U.S -based plaintiffs, principally alleging violations of federal antitrust laws based nn an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action") in January 2015. Ihe Firm entered into a settlement agreement in the U.S class action. Following this settlement, a number ol additional putative class actions were filed seeking damages (or persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (tne "consumer action"), participants or beneficiaries ol qualified ERISA plans (the "ERISA actions'), and purported indirect purchasers of FX instruments (the "indirect purchaser action*) Since then, the Firm has entered into a revised settlement agreement to resolve the consolidated u 5. class action, including the exchange-based actions, and that agreement has been preliminarily approved by the Court The District Court has dismissed one of the ERISA actions, and the plaintiffs have filed an appeal The consumer action, a second erisa action and the indirect purchaser action remain pending in the District Court.

in September 2015, two class actions were filed in Canada against the Firm as well as a number of other FX dealers, principally tor alleged violations ol the Canadian Competition Act based on an alleged conspiracy to fix the prices of currency purchased in the FX market The first action was Filed in the province of Ontario, and seeks to represent all persons in Canada who transacted any FX

instrument Tnt second anon was 1 Jed ir. tin.- innvmre o: Oueiiet. and seeks auihyrizannn :o u-;uesen: on 1-/ ihuse persons m Quebec who engaged in i > transactions in idle 201 t>. tne Firm seined the Canadian class act ior.', [hose settlements are Mibieci to Com i appioval

Generrf/MotorsL/rigannn if'Morftan (hase Sank, n a participated in. and was the Administrative Agen; on ttehalf of a syndicate of lenders on. a > l 5 billion syndicated lerm Loan facility ("Term Loan") tor General Motors Corporation ("GM") In July 2000. in Conner, turn with Ihe GM bankruptcy iiroceedings (fie Officioi Coinrmriee of Unseiureo CredKois ol Motors Liquidation Company ("Creditors Committee") filed a lawsuii agamsi JPMorgan cnase Bank N a . m its individual capacity and as Admimsiraiive Agent lor oilier lenders on the lerm l oan seeking io hold the underlying lien invalid based un the Filing ot a IK(3 leiuunation statement relating to the lerm loan m January 20! 5. following several court proceedings, [hp United Stales Court of Appeals tor ihe Second Oram rpveised the Bankiuptcv Couil's dismissal of Hie Creditors Committees claim and remanded the rase lo the Bankruptcy Court with instructions lo entei partial summary judgment for the Creditors Committee as io me termination statement The proceedings in tup U.inkrupiry fourl continue with respect to. among other things, additional defenses asserlpd by JPMorgan Chase Bank. N A and the value of additional Citlateral oi '.he farm Losr Hut was unaffected hy the filing ot the termination statement at issue In addition, certain lerm Loan lenders died cross-claims agams: jPMarr.au <http://jPMarr.au>Chase Bank, n a m the Bankruptcy Court seeking indemnification and asserting various claims

Interchange Litigation A group of merchanls j.tcJ retail associations filed a series of class action complaints alleging thai Visa and MasterCard, as well as cenam banks, conspired to set the price of credit and debit card interchange fee-., enacted respective rules in violation ol antitrust laws, and engaged in lymrj/bundling and cxclusrvp dealing The parties entered into an agreement to settle the cases for a cash payment of (6] billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of ihe end of the opt-out period The agreement also provided for modilications to each credit card network's rules, including those that prohihn surcharging credit card transactions, in Decembei 2013. the District Court granted final approval of the settlement

a number ol merchants appealed to Ihe united States Court of Appeals lor the Second Circuit, which, in June 2016. vacated the District Court's certification of the class action and reversed the approval of the class settlement The case has been remanded to the District Court for further proceedings consistent with Ihe appellate decision Both the plaintiffs and the defendants have filed pennon; seeking review by the U 5 Supreme Court ol the Second Circuit's decision

in anrtninr. cenam merchants nave died individual anions against Visa and MasterCard, as well as agamst the '< inn and oilier banks, and those actions are proceeding

investment uanagemeni litigation The I irm is defending two pending cases that are coordinated for pre-trial and trial purposes, alleging thai investment portfolios managed bv J P Morgan investment Management ("IPMIM") were inappropriately invested in securities backed by residential real estate collateral Plaintiffs Assured Guaranty (U k) and Ambac Assurance UK Limited claim that JPMIM is liable for total losses of more than (I billion in market value of these securities Discovery has been completed in January 2016 plamtills filed a jomi partial motion lor summary judgment in the coordinated actions in rebruary 2017. the Court ruled m plaintiffs favor as to the interpretation ol an applicable statutory provision and the rejection of a certain defense, but otherwise preserved lor trial the determination ol whether JPMIM breached the governing contract and is liable loi plaintiffs' claimed losses under the siandaid of gross negligence. The trial is scheduled to begin m March 2017

Lehman Diothers Bankruptcy Frocecdings in January 2016, JPMorgan Chase Bank, N A and Lehman Brothers Holdings inc ("LBHi") and several of Ltjm's subsidiaries reached an agreement, approved by the Bankruptcy Court, resolving several disputes between the parties ihe January 2016 settlement du] nul lesolve the following remaining matters In the Bankruptcy Court proceedings, LBHi and its Official Committee ol Unsecured Creditors filed an objection to the claims asserted by JPMorgan Chase Bank. N.A agamst lBmi with respect to clearing advances made to Lehman Brothers inc. principally on the grounds that the Firm had not conducted the sale of the securities collateral held tor its claims in a commercially reasonable manner i.Bili also brought two claims objections relating lo securities lending claims and a group of other smaller claims in January 2017, the Firm entered into an agreement to settle all of these remaining claims, and this settlement has been approved by the Bankruptcy Coun.

LIBOR and Other Benchmark Rate Investigations and Litigation IPMorgan Chase has received subpoenas and requests for documenls and. in some cases, interviews, from federal and state agencies and entities, including the U S. Department of Justice ("DOJ"), the U.S Commodity Futures Trading Commission ("CFTC"), the U.S Securities and Exchange Commission ("SEC") and various state attorneys general, as well as the European Commission ("EC"), the u K Financial Conduct Authority ("FCA"). (he Canadian Competition Bureau, the Swiss Competition Commission ("ComCo") and other regulatory authorities and banking associations around ihe world relating primarily to the process by which interest rates were submitted lo the Ornish Bankers Association ("BSA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008 Some of the inquiries also relate to similar processes by which information on rates is submitted to the European

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Notes to consolidated financial statements

Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association tor the setting of Tokyo interbank Offered Rates ("TiBOR*). as well as Processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods The Firm is responding to and continuing to cooperate with these inquiries As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In December 2016. the Firm resolved ComCo inquiries relating to these same rates. ComCo's investigation relating to EURIBOR. to which the Firm and other banks are subject, continues. In December 2016. the EC issued a decision against the Firm and other hanks finding an infringement of European antitrust rules relating to EURIBOR The Firm has filed an appeal with the European General Court In June 2016. (he DOJ informed the Firm that the DOJ had closed its inquiry into LIBOR and oi her benchmark rates with respect to the Firm without taking action Other inquiries have been discontinued Without any action against JPMorgan Chase, including by the SEC, FCA and the Canadian Competition Bureau.

■n addition, the Firm has been named as a defendant along With other banks in a series of individual and putative class actions filed in various United States District Courts These actions have been filed, or consolidated for pre-trial Purposes, m the United States District Court for the Southern District of New York (n these actions, plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S dollar LIBOR. Yen LIBOR, Swiss franc LIBOR. Euroyen TiBOR, EURIBOR, Singapore Interbank Offered Rate ("SIBOR"), Singapore Swap Offer Rate ("SOR") iind/or the Bank Bill Swap Reference Rate ("BBSW") by Submitting rates thai were artificially low or high Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes ■n u 5 dollar LIBOR. Yen LIBOR. Swiss franc LIBOR, Euroyen TiBOR, EURIBOR. SIBOR. SOR or BBSW and assert a variety ol claims including antitrust claims seeking treble damages. These matters are in various stages of litigation

in the u S dollar LIOOR-related actions, the District Court dismissed certain claims, including the antitrust claims, and permitted other claims under the Commodity Exchange Act and common law to proceed In May 2016, the United States Court of Appeals for the Second Circuit vacated the dismissal of the antitrust claims and remanded the case to the District Court to consider, among other things, whether the plaintiffs have standing (o assert antitrust claims in July 2016. JPMorgan Chase and other defendants again moved in the District Court to dismiss the antitrust claims, and in December 2016. the District Court granted in part and denied in pari defendants' motion, finding that certain plaintiffs lacked standing to assert antitrust claims Separately, m October 2016. JPUorgan Chase and other defendants died a petition to the U.S Supreme Court seeking review of the Second Circuit's decision thai vacated
the dismissal of plaintiffs' antitrust claims. That petition was denied.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the u.S dollar isdafix rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodity Exchange Act. in April 2016, the Firm settled the ISDAFIX litigation, along with certain other banks. Those settlements have been preliminarily approved by the Court.

Madoff Litigation A putative class action was filed in the United States District Court for the District of New Jersey by investors who were net winners (i e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in a prior class action settlement. These plaintiffs allege violations of the federal securities law, as well as other state and federal claims A similar action was filed in the United States District Court for the Middle Districl of Florida, although it was not styled as a class action, and included claims pursuant to Florida statutes. The Florida court granted rhe Firm's motion to dismiss the case, and in August 2016, the United States Court of Appeals for the Eleventh Circuit affirmed the dismissal The plaintiffs have filed a petition for writ of certiorari with the United States Supreme Court, in addition, the same plaintiffs have re-filed their dismissed state claims in Florida state court, where the Firm's motion to dismiss is pending The New Jersey court granted a transfer motion to the Umied states District Court for the Southern District ol New York, which granted the Firm's motion to dismiss, and the plaintiffs have filed an appeal of lhat dismissal

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory investigations. The Firm and affiliates (together. "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, 'Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS") Following the settlements referred to below, the remaining civil cases include one investor action, one action by a monolme insurer relating to Bear Stearns' role solely as underwriter, and actions for repurchase of mortgage loans The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative anions relating to the Firm's MBS activities, and one action remains pending.

issuer lirifjf|on - individual Purchaser Acoons. With (he exception of one remaining action, the Firm has seeded all of the individual actions brought against JPMC. Bear Steams and Washington Mutual as MuS issuers (and, in some cases, also as underwriters of their own MBS offerings) Underwriter Actions. The Firm is defending one remaining action by a monolme insurer relating lo Bear Steams' idle solely as underwriter for another issuer's MBS offenng The issuer is defunct

Repurchase (. itigation The Firm is defending a number ol actions brought by trustees, securities administrators and/ or master servicers of various MBS trusts on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches ol various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' tees and costs and oilier remedies The Firm has reached a settlement wilh Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, and the Fedelal Deposit Insuiance Corporation (the "FDIC) in connection with the litigation related to a significant number of MBS issued by Washington Mutual, that case is described m the Washington Mutual Litigations section below. Other repurchase actions, each specific lo one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation

In addition, the Firm and a group of 21 institutional MBS investors made a binding orfer to the trustees of MBS issued by JPMC and Bear Steams providing for the payment of $4 5 billion and the implementation of certain servicing changes by /PMC, to resolve ati repurchase and servicing claims lhat have been asserted or could have been asserted with respect to 330 MBS trusts created between 2005 and 2008 The offer does not resolve claims relating to Washington Mutual MBS The trustees (or separate and successor trustees. [1] for tins group of 330 iriwts have accepted the settlement for 319 trusts in whole or in pari and excluded Irom the settlement 16 trusts in whole or in part The trustees' acceptance has received final approval from the court

additional actions Jiave been fjJed against tbjriJ-pany trustees that relate to loan repurchase and servicing claims involving trusts sponsored by JPMC, Bear Stearns and Washington Mutual

The Firm has entered into agreements with a number ot MBS trustees or entities that purchased MBS that toll applicable statute of limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims There is no assurance that the Firm will not he named as a defendant in additional MBS-relaled litigation

Derivative Actions. * shareholder denvalive action against the Firm, as nominal delendant. and certain of its current and former officers and members ol its Board of Directors relating to the Firm's MBS activities is pending in California lederal court. Defendants have filed a motion lo dismiss the action

Government Enforcement Investigations and.hljflattpn The Firm is responding to an ongoing investigation being conducted by the DOJ's Criminal Division and two United States Attorney's Offices relating to MBS offerings securiti7pd and sold by the Firm and its subsidiaries

Mortgage-Related Investigations and Litigation In January 2017, a Consent Judgmenl was entered by the United States Distnrt Cuurt lor the Southern District of New York

resolving allegations by the Civil Division of the United States Attorney's Office for the Southern District of New York that the Firm violated the Fair Housing Act and Equal Credit Opportunity Act by giving pricing discretion to independent mortgage brokers in its wholesale lending distribution channel which, according to the government's model, may have charged higher lees and interest rates to African-American and Hispanic borrowers than non-Hispanic White borrowers during the period between 2006 and 2009. The Firm denied liability but agreed to pay a total of approximately 155 million to resolve this matter In addition, three municipalities have commenced litigation against the Firm alleging violations of an unfair competition law or Ihe rair Housing Act The municipalities seek, among other things, civil penalties for the unfair competition claim, and. for the Fair Housing Act claims, damages resulting from lost tax revenue and increased municipal costs associated with foreclosed properties The municipal actions are stayed pending an appeal by the City ol Los Angeles to the United States Court of Appeals for the Ninth Circuit, as well as the United States Supreme Court's review of decisions of the United Stales Court of Appeals lor the Eleventh Circuit which held, among other things, that the Oly of Miami has standing under the Fair Housing Act to pursue similar claims against other banks.

Municipal Derivatives Litigation, several civil actions were commenced in New York and Alabama courts against the Firm relating lo certain Jellcison County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Tirm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County l he County filed for bankruptcy in November 2011 In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all (he above-described actions against the Firm would lie released and dismissed with prejudice In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions lo the Plan ol Adjustment's effectiveness, including the dismissal of the actions against the Tirm. were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013 Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Wan of Adjustment The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as delcndants in several actions died in connection with the receivership and bankruptcy proceedings pertaining to Thomas I Pettcisand certain affiliated entities (collectively. "Petters") and the Polaroid

Curinnancn ihp :>m:lp.il jcnons against jT'Muiiar-. Chase and its affil.aips nave :l?en brought by a tou'l .uwomied receive! lor Petters and ihe trustees m bankruptcy proceedings for nn-e Petters entities These actions generally sec-k to avoid i enair- iiu:ative iransfers m ioiiih'Ukii: witn <■ > ih" ?O0G aiquisition by Petters ol Polaroid which 3; tne nme was majority-owned bv OEP. In) [wo credit facilities mat JPMorgan fn.tse and oiner fmani lal instiiuiions entered into with Polaroid, and (m) a credit line anil invest mem at munis held by Penes m January 201 /. the Court denied the defendants' motion 10 dismiss an amended complaint died hy the plaintiffs

Plopnetary ProcfiJtfs iiivwirjanons and I itigmun In Oecember 2015, JPUurgan Chase Bank. N A and J P Morgan Securities LLC agreed to a settlement with the SEC. and U'Morpan Chase Bank. N A ajjieed to a settlement with the cnc. regarding disclosures to clients concerning conflicts associated with Ihe Fum's sale and use ol proprietary products, such as J.P Morgan mutual funds, in Ihe Firm's CCB and AWM wealth management businesses, and the II S Pnvate Bank's disclosures concerning the use ol hedge funds thai pay placement agent fees 10 JPMorgan Chase hroker-riealer affiliates The Firm settled with an additional government authority in July 2016, and continues to coopeiate with inquiries from other government authorities concerning disclosure of conflicts associated [1] wild the Firm's sale and use of ploonetary products A putative class action, which was died in Ihe United States District Court for the Northern District of Illinois on behalf of financial advisory clients from 2007 to the present whose funds were invested in propnetary funds and who ware charged investment management fees, was dismissed by the Court The dismissal has been affirmed on appeal

Referral Hiring Practices Investigations. In November 2016, the Firm entered into settlements with DOJ, Ihe SEC and the Board of Governors of the Federal Reserve System (the "federal Reserve") to lesolve Ihose agennes' respective investigations relating to a former hiring program for candidates referred by clients, polenlial clients and government officials in the Asia Pacific region, other related investigations are ongoing, and the Firm continues lo cooperate with these investigations. Washington Mutual litigation. Proceedings related to Washington Mutual's failure ate pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Tiust Company, initially against the FDIC and amended to include JPMorgan Chase Bank. N A as a defendant, asserting an estimated 16 bilhon to $10 billion in damages based upon alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements The case includes assertions lhat JPMorgan Chase Bank. N.A mav have assumed liabilities lor the alleged breaches of representations and warranties in the mortgage securitization agreements In June 2015. the court ruled in favor 01 JPMorgan Oiase Bank x a on the question nl wheiber the Firm 01 the FDIC bears responsibility for Washington Mutual Bank's repurchase negations, holding that JPMorgan Chase Bank na assumed only those liahilmes that were reflected on Washington Mutual Bank's financial accounting records as of September 2b, 2008. and only up to the amount ol the book value reflected therein The TDiC has appealed that ruling

IPMorgan Chase has also filed complaints in the United SI ale; District Court lor Ihp Distnci of Columbia against the FDiC, in us corporate capacity as well as in its capacity as receiver for Washington Mutual Bank, asserting multiple claims for indemnification under the lerms ol the Purchase ft Assumption Agreement between JPMorgan Chase Bank, N A. and the FDIC relating to JPMorgan Chase Bank, N A "s purchase of substantially all ol the assets and certain liabilities of Washing!nn Mutual Bank (the "Purchase ft Assumption Agreement")

The Firm, Deutsche Bank National Trust Company and the FDIC have signed a settlement agreement to resolve (1) pending litigation hi ought by Deutsche Bank National Trust Company against the FDIC and JPMnigan Chase Bank, N A , as defendants, relating to alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreemenls and (11) JPMorgan Chase Bank, N.A's outstanding inclemnilication claims pursuant io the terms ot Ihe Purchase & Assumption Agreement The settlement is subject to certain judicial approval procedures, and both mailers are stayed pending anproval of (he settlement.

Wendel Since 2012, the French criminal authorities have been investigating a series of transactions entered into by semoi managers of wendel Invesbssoment ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in wendel JPMorgan Chase Bank. N A . Pans branch provided financing for the transactions to a number of managers of Wendel in 2007. JPMorgan Chase has cooperated with the investigation. The investigating judges issued an ordonnance de renvoi on November 30, 2016, referring JPMorgan Chase Bank. N A to the French tribunalcorrcctionnel for alleged complicity in tax fraud No date lor trial has been set by the courl. The Firm has been successful in legal challenges made to the Court of Cassation. Trance's highest court, which have been referred back to and remain pending before the Paris Court ol Appeal in addition, civil proceedings have been commenced against JPMorgan Chase Bank, n.a by a number of the managers. The claims are Separate, involve different allegations and are ai various stages of proceedings.

in addition to the various legal proceedings discussed above. JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to

future

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In view ot the inherent difficulty ol predicting the fulsome o (legal proceedings, pai tKiiaily wheie thf ;laimjnrs seek very laige or indeterminate damages, or where the matters present novel legal theories, involve a large number 0l parties o r are in early stages nl discovery, th" Fin:-, cannot state with confidence what will in: Ihe eventual outcomes of Itie rurrenily perdmg mailers, the timing of tneir uilimaie resolution 01 the eventual losses, lines, penalties or impart related 10 those maliurs jl'Mo^gan Chase believes, based upon i:s current knowledge. al;ei cons-.il <http://cons-.ii> tat ion with counse' and afiei taking mlo accouni its curreM iiupaiion reserves, that the legal proceedings c unently pending against n should not have a material adverse effect on the Firm's consolidated financial condition Tne Finn nnres, however, that in light ol the uncertainties involved in such proceedings, these is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently acciuc-d or that a matter will noi have maierial reputations! consequences As a result, ihe outcome of a particular matter /nay he maierial lo JPMorgan Chase s operating results lur a particular period, depending on. among other factors, the size of the loss o r liability imposed and the level ol JPMorgan Chase's income for that period

Note 32 - International operations

The following table presents income statement- and balance sheet-related information for JPMorgan Chase by major international geographic area ihe Firm defines international activities lor purposes of this footnote presentation as business transactions lhat involve clients residing outside of ihe u.S . and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

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2016

Europe/Middle Liil and Africa Latin America and Hie Car ilibean
Total Nor Ih Amen
Total
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Europe/Middle tail and Africa Aua antl Pacific
latin AmnliJ and the Canbbea

North America
■r) Africa
Total
2014
tulooe/MidrJle East a 1 Asia and Pacilic
Latin America and [lie CaliWiean
Total International Nor Hi Aml'dra"

In) Substantially m'lrcts tlit USUI) ItL'wnu- is composed ol no: interest income a 10 lxperse is ronipo'.r-d of nnniilierrsl eipense;

As the rirm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U S and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33.

5,292 1.199
1.711
X.212
8,550 4,211 1,6)2

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets The majority of the Firm's long-lived assets are located tn the U.S.

5,203 14,510
14,195 46,737
7,518 27,011

194,1)4 * 156,946 42,971
194,051 1J96.921
24.733 i 2,490,972
7.660 23.042
5,t)96 18 746

347.647 * 138.747 48.18S

S34.S79 1,817.119
3,935 1,0S1
5.890 1.605
24,442 j 2.SS).69B
5.2S5 16.490
16.227 48.186

481.328 < 147.3S7 44.S67
673.ZS2 1.899.022
al December 31.2016.201S ar
21.745 i 2.572.274

Note 33 - Business segments

The Tirm is managed on a line of business basis There are four major reporiable business segments - Consumer & Community Banking. Corporate ft Investmenl Bank. Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment The business segments are determined based on ihe products and services provided, or the type ol customer served, arid ihev reflect the manner in which financial information is currently evaluated by management Results of these lines of business are presented on a managed basis For a further discussion concerning jPMoigan Chase's business segments, see Segment results ol this footnote The lollowmg is a description of each of the Firm's business segments, and the products and sei vices they provide lo their respective client bases

Consumer & Community Banking

CCB olters services to consumers and businesses through bank branches, ATMs, online, mobile and telephone banking CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production. Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions ft Auto Consumer ft Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions 10 small businesses Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of i evidential mortgages and home equity loans Card. Commerce Solutions & Auto issues credit cards to consumers and small businesses, of lers payment processing services to merchants, originates and services auto loans and leases, and services student loans Corporate ft Investment Bank

The CIB. which (onsisis of Banking anil Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and tieasury and securities producis and services to a glohal client base of (oiporalions. investors, financial institutions, government and municipal entities Banking offers a lull range of investmenl banking products and services in all mainr capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication Banking also includes Treasury Services, which provides Uansaction services, consisting of cash management and liquidity solutions Markets & investor Services is a global markel-

maker in cash secunties and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research Markets & Investor Services also includes Securities Services, a leading global custodian that provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investmenl funds.

Commercial Banking

CB deliveis extensive industry knowledge, local expertise and dedicated service lo U.S and U S. multinational clients, including corporations, municipalities, financial institutions and nonprodi entities with annual revenue generally ranging from $20 million to $2 hillion. In addition, CB provides dnancing to real estate investors and owners Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management lo meet its clients' domestic and international financial needs Asset ft Wealth Management

AWM. with client assets of $2.5 trillion, is a global leader in investment and wealth management AWM clients include institutions, lugh-net-worth individuals and retail investors in many major markets throughout the world AWM oflers investment management across most major asset classes including equities, fixed income, alternatives and money market funds awm also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For wealth Management clients. AWM also provides retirement products and services, brokerage and banking services, including trusts and estates, loans, mortgages and deposits, the majority of AWM's client assets are in actively managed portfolios

Corporate

The Corporate segment consists of Treasury and CIO and Other Corporate, which includes corporate staff units and expense that is centrally managed Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan The major Other Corporate units include Heal Fslate. Enterprise Technology. Legal, Compliance, Finance. Human Resources, internal Audit. Risk Management. Oversight & Control, Corporate Responsibility and various Other Corporate groups

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Notes to consolidated financial statements

Segment results

The lollowmg utiles provide a sum mar y ol ihe F irm s s&gmeni results as ot or for ihe veins ended December il, 2016. 20IS and 20M on a managed bans Tlie rirm's definition ol managed oasis starts wilM the reported ll s Caap results and includes lenain reclassifications to ("eseni loial net revenue f nomnterosi revenue and npi interest income) for each of ihe rewortable business segments on a rTE£ basis Accordingly, revenue from

Segment results and reconciliation

investments rereivmg tat credits and ta>-exemDi securities is presented m the managed results on a basis comparable to taxable investments and securities This allows management io assess the comparability of revenue Irom year-to-year arising from both taxable and tax-exempt sources The corresponding income iax imparl related to tax-exempi uems is recorded within income tax expense/ (benefit)

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Supplementary information

Selected quarterly financial data (unaudited)

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Distribution of assets, liabilities and stockholders' equity: interest rates and interest differentials

Consolidated average balance sheet, interest and rates (■"ovnled below is a summary oi JPUorgan tnases i.Cinso[i]clated average haiarii.es <http://haiarii.es> interest rates and interest differrniials. on a taxable-equivalent hasi*. lor the years .'Oil through Old income compuied on a taxahle-etjuivalent basis is the income reported m Ihe Consol-rtaied
statements o! income adjusted 10 present uueresi ni ome and average (ales earned on assels exemp: from income taxes (primarily lederal taxes) or. a basis comparable wuh other taxable investments 1 he incremental tax iate used lor calculating the taxable-equivalent adj-..siiuen: was approximately 38'tt> in 2016. 201 5 and 2014
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Interest rates and interest differential analysis of net interest income - U.S. and non-U.S.

Presented below is a summary of interest rates and interest differentials segregated between U.S and non-U.S operations for the years 2014 through 2016. The segregation ol U.S and non-U.S. components is based on the location of the office recording the transaction, intercompany funding generally consists of dollar-denominated deposits originated in various locations that are centrally managed by Treasury and cio.

(table continued horn previous najjf

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Changes in net interest income, volume and rate analysis

itie- tahie below present an analysis ol the eliect on net mieresi income Irom vol-.nne and rate changes tor tlie periods 201 o wvhii OO'i'j and ?015 versus JOM in tins analysis, when me change cannot he isolated to either volume or rate, it f;js been aMfiraied io volume

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ADS- Assei-hacked secu.-rues

Active foreclosures loans relet red to foreclosure where formal foreclosure proceedings are ongoing includes both judicial and iioi-iuOiciaf states

ATS. Available foi sale

ALCO Assei Liability Committee

Allowance for loan losses to total loans: Represents nenod end allowance for loan losses divided by teiamed loans

Alternative assets The following types ol assets constitute alternative investments - hedge lunds. currency, real pstate. prival! [1] ecuily and oihei investment lunds designed to focus on non traditional strategies

AWU Asset 1 wealth Management

AOCI Accumulated otner comprehensive mcome/(loss)

ARM Adjustable rate mongagc(s)

AUC Assets under custody

AUM "Assets under management": Represent assets managed bv awm on behalf of i:s Private Banking, institutional and Retail clients includes 'Committed capital noi Called " on which awm earns lees

Auto loan and lease origination volume: Dollar amount ol auto loans and leases originated

Beneficial interests issued by consolidated ViCs: Represents the interest ol third-party holders of deol, equity securmes. or other obligations, issued by VIEs thai JPMorgan Chase consolidates

Benefit obligation: Relers to the projected benefu obligation fur pension plans and the accumulated postretiremen! benefit obligation for OPEB plans

BHC: Bank holding company

Card Services includes the Credit Card and Commerce Solutions businesses

CB: Commercial Banking

CSB Consumer & Business Banking

CCAR: Comprehensive Capital Analysis and Review

CCB. Consumer & Community Banking

CCO: Chief Compliance Officer

CCP- "Central counterparty - is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to evely buyer and thereby ensuring Ihe future performance ot open contracts A CCP becomes counterparty to trades with market participants

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through novation, an open odor system, oi another l-gally binding arrangement

CDS credil default swans

CEO. Chicl Executive OHicer

CCT] capital: Common Equity tier l Capital

CFTC: Commodity futures trading Commission

CFO. Chiel rmancial Officer

Chase Bank USA, N.A.: Chase Bank USA. National Associaunn

CiB: Corporate & investment Bank CiO: Chiel Investment Office

Client assets: Represent assels undei management as well as custody, brokerage, administration and deposit accounts

Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept io on-balance sheet liabilities (e g.. commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part ot client cash management programs. Dunng the third quarler 2015 the Firm completed the discontinuation of us commercial paper customer sweep cash management program

CLO. Collateralized loan obligations

CLTV: Combined loan-to-value

Collateral-dependent, a loan is considered to be collateral-dependent when repayment ol the loan is expected lo be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources

Commerce Solutions is a business chat primarily processes transactions lor merchants

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products Services include procurement, corporate travel and entertainment, expense management services, and busmess-to-busmess payment solutions. !

COO: Chiel Operating Officer

Core loans: Represents loans considered central to (he Firm's ongoing businesses, core loans exclude loans classified as trading assets, runoff portfolios, discontinued porllolios and portfolios the Firm has an intent to exit

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa) The duration of a credit cycle can vary from a couple ol years to several years

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk lo

Glossary of Terms and Acronyms

another party (the protection seller) Upon the occurrence of a ciedit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant international Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caal and below, as defined by SAP and Moody's.

CRO. Chief Risk Officer

CTC: CIO. Treasury and Corporate

CVA: Credit valuation adjustments

Debit and credit card sales volume' Dollar amount of card member purchases, net ol returns

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits

Distributed dcnial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

DFast.- Dodd-f-'rank Act Stress Test

Oodd-Frantc Act: wall Street Reform and consumer

Protection Act

DOj; U.S. Department of Justice DOLiU.S Department of Labor DRPC: Directors' Risk Policy Committee ova: Debit valuation adjustment E*P: Fxploration S Production EC; European Commission

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument thai affect some or all of thc> cash flows or the value ol the instrument in a manner similar to a derivative An instrument containing such terms or features is referred to as a "hybrid ' The component of lhe> hybrid that is the non-derivative instrument is referred to as the "host" For example, callable debt is a hybrid instrument lhat contains a plain vanilla debt instrument (i o.. the host) and an embedded option that allows the issuer to redeem the debt issue at a speohed date tor a
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specified amount (i.e., the embedded derivative), however, a floating rate instrument is not a hybrid composed ot a fixed-rate instrument and an interest rate swap

ERISA: Employee Retirement income Security Act of 1974

EPS: Earnings per share
ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via > central clearing house

Elh European Union

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FCC: Firmwide Control Committee

FDIA: Federal Depository insurance Act

FDIC: Federal Deposit Insurance Corporation

Federal Reserve: The Board of the Governors ot the Federal Reserve System

Fee share: Proportion ot fee revenue based on estimates ol investment banking fees generated across the industry from investment banking transactions in M&A. equity and debt underwriting, and loan syndications. Source Dealogic, a third-party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FFELP: Federal Family Education Loan Program

FFIEC: Federal Financial Institutions Examination Council

FHA: Federal Housing Administration

FHLflt Federal Home Loan Bank

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus. Firm: JPMorgan Chase ft Co

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i e„ "spot rate") to determine the forward exchange rate.

FRO Firmwide Risk Committee

Free standing derivatives: a derivative contract entered into either separate and apart from any of the Firms other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable

FSB: Financial Stability Board

FTE: Fully taxable equivalent

FVA: Funding valuation adjustment

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FX: Foreign exchange

G7: Group of Seven nations: Countries in (he G7 are Canada. France, Germany. Italy, Japan, the U.K. and the U.S

G7 government bonds: Bonds issued by the government ot one of the G7 nations

Ginnie Mae: Government National Mortgage Association

GSE: Fannie Mae and Freddie uac

GSIB: Global systemically important banks

HAMP: Home affordable modification program

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees HE LOAN: Home equity loan HCLOC: Home equity line or credit

Home equity - senior lien: Represents loans and commitments where JPUorgan Chase holds the first security interest on the property.

Home equity - junior lien. Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other hens

Households A household is a collection of individuals or entities aggregated togeihcr by name, address, tax identifier and phone Reported un a one-month lag

HQLA. High quality lirjuid assets

HTM:He1d-to-matunty

ICAAP. inlerna) capita) adequacy assessment process

IDI: Insured depository institutions

IHC IPMorgan Chase Holdings LLC. an intermediate holding
company

Impaired loan: Impaired loans are loans measured at amortized cost, tor which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms ol the agreement Impaired loans include the following

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange Income: A lee paid to a ciedil card issuer in the clearing and settlement of a sales or cash advance transaction

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal nsk assessment system "investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as delined by independent rating agencies. ISDA intei national Swaps and Derivatives Association

or can Cl.jie S Cc/2016 Annual Kepcrl

JPMorgan Chase: JPMorgan Chase & Co

JPMorgan Chase Bank, K.A.: JPMorgan Chase Bank, National Association

JPMorgan Clearing: J.P Morgan Clearing Corp.

JPUorgan Securities: J P Morgan Securities LLC

Loan-equivalent: Represents the portion of the unused commitment oi other contingent exposure that is expected, based on average portloho historical experience, to become drawn prior to an event of a default by an obligor.

LCR: Liquidity coverage ratio

LDA. Loss Distribution Approach

LGD: Loss given default

LIBOR: London interbank Offered Rate

LLC: Limited Liability Company

LOB. Line of business

Loss emergence period-. Represents the time period between the date at which the loss is estimated to have been incurred and the realization ol thai loss

LTIP. Long-term incentive plan

LTV: "Loan-to-value": Tor residential real estate loans, (he relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Oriqination date LTV ratio

The LTV ratio at the origination date of the loan. Origination dale LTV ratios are calculated based on the actual appraised values of collateral (i.e , loan-level data) ai the origination date

Current estimated LTV ratio

An estimate of the LTV as of a certain date The current estimated ltv ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level These MSA-level home price indices consist of actual data to the extent available and foiecasted data where actual data ts not available As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values, as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property Combined LTV ratios are used for junior lien home equity products

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis Management uses this non-GAAP linancial measure at the segment level, because it

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Glossary of Terms and Acronyms

believes [his provides mlormation io enable mvestoi 5 10 uncersiand the underlying operational prrformance and (rends ol the panicular business segment and facilitates a comparison ot the business segment with the performance ol competitors

Master netting agreement An agreement between two counterparties who have multiple contracts with each other thai provides tor the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, m the event of default on or termination ol any one contract

MBS. Mortgagp-hacked securities

MO&A: Management's discussion and analysis

MU0A: Money Markei Deposit Accounts

Moody's: Moody's investor Services

Mortgage origination channels

Retail' Borrowers who buy or refinance a home through direct contact with a mortgage banker employed hy the Firm using a branch office, the Internet or by phone. Borrowers are lrequcntly referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties

Correspondent - Banks, thrifts, other mortgage banks and other financial institutions that sei: closed loans to lhe Firm

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than suhpnme loans but have characteristics that would disqualify the borrower from a traditional prime loan Alt-A lending characteristics may include one or more of the following (it limited documentation, (n) a high CL1V ratio, (in) loans secured bv non-owner occupied properties, or (iv) a debt-to-income ratio above normal limits A substantial proportion of the Firm's Alt-A loans arc those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income

Option A ft Us

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides lhe borrower with the option each month to make a fully amortizing, interest-only or minimum payment The minimum payment on an option arm loan is based on the interest rate charged during the introductory period This introductory rate is usually significantly below the fully indexed rate The fully indexed rate is calculated using an index rate plus a margin. Once the introductory penod ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan Option ARM loans are subjeel to payment recast, which

282

ronverts the loan to a variable-raie lully amoi nzmg loan upon meeting spended loan balance and anniversary dale triggers Pi imp

Pnme mortgage loans are made to borrowers wth good credit records who meet specific underwriting requirements, including prescriptive requirements relaled 10 income and overall debt levels New prime mortgage borrowers provide lull documentation and generally have reliable payment histories

Subprime

Subprime loans are loans that, prior to mid-2008, were oflcied to certain customers with one or more high risk characteristics, including but not limited to. (i> unreliable or poor payment histories, (ii) a high LTV ratio of grealer than 80% (without borrower-paid mortgage insurance), (in) a high debi-to-income ratio, (iv) an occupancy type for the loan is other than the borrower's primary residence, or (v) a history of delinquencies or late payments on the loan

MSA: Metropolitan statistical areas

MSR. Mortgage servicing rights

Multi-asset: Any fund or account that allocates assets under management (o more than one asset class

NA: Data is nol applicable or available for the period presented.

NAV: Net Asset value

Net Capital Rule: Rule 15c3-l under the Securities Exchange Act of 1934

Net charge-off/freCTrvery) rate: Represents net charge-offs/(rccovcnes) (annualized) divided by average retained loans for the reporting penod.

Net mortgage servicing revenue includes the following components:

Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income, and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows

Risk management represents the components of

Mortgage Servicing's MSR asset that are subject lo ongumg risk management activities, together with derivatives and other instruments used in those risk management activities

Net production revenue: Includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously sold loans

JPUorgan Chut t CnVJf)16 Annual Kvuoi

Net revenue rate Repn-scms Card Services nei --evmtK-lannual .'edi t-npressen as a percentage «l aveiai;'.- loans lor the oeuod

Net yield on interesl-carmng assets- Tiit average iate lor uiteiesi-eamrng asseis >ess (tie average rate paid for all sources nl lunds

NM No: meaningful

NOL. Net operating loss

Nonaccrual loans- Loans lor which interest income is not recognized un an accrual hes:s Loans (oiher than credn card loans and cetiam consumer loans insured hy ll S gove ʳnmem agencies) are placed on nanatnual status when lull payment of pnnnpal and interest is not expected iei;ardless of delinquency status, or when principal and mierosi have been in celauit for a oenod ot °0 days or more unless the loan is both well secured and m the process of collection Collateral-dependent loans are typically maintained on nonacdual status Nonperforming assels: Nonperforming assels include nonaccrual loans, nonperforming derivatives and certain assets acquired m loan satisfaction orodominantly real esiate owned and other commercial and pcisonal property

NOW Negotiable order ot withdrawal

NSFR. Net stable (milling r^nn

OAS- Oubon-adjusted spread ,

OCC: Office of the Comptroller of the Cutrency

OCI. Other comprehensive income/! loss)

OEP. One EquuyParineis

OtS. Overnighi index swap

OPEB: Other postretiremenl employee benefit

ORMF. Operational Risk Managemeni Framework

OTTI- Other-than-temporary impairmeni

Over-the-counter ("OTC") derivatives. Derivative contracts that are negotiated, executed and settled bilaterally between (wo derivative counterparties, where one or both counterparties is a derivatives dealer Over-the-counter cleared ("OTC-cleared") derivatives Derivative contracts lhai aie negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative tounierparty is only exposed to the default ot ihai clearing house

Overhead ratio- Noninterest expense as a percentage of total net revenue

Parent Company- JPUorgan Chase & Co

Participating securities Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included m lhe earnings per share calculation

Ji'Horgan Cruse 1 Co/ZD 16 Annual Depart

using ihp two-class method jTMorgan Chase i;r,ints restiiCied Slock and RSUs 10 certain employers under US siock-hased compensation programs, which t-nutle me recipients lo receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends liairi to noiners of common stock These unvested awards mec; the rielinilion of participating securities Under lhe iwo-ciass method, all earnings (disirihuted and undistributed) are allocated lo each class of common stock and participating securities based on their respective rights to receive dividends

PCA Prompt corrective action

PCI "Purchased credit-impaired" loans represents loans thai were acquired in the Washington Mutual transaction and deemed lo he credit-impaired on the acquisition dale in accordance with the guidance of the FASB The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e g , product type, LTV ratios, riCO scores, past due status, geographic location) A pool is then accounted for as a single assel with a single composite interest rate and an aggregate expectation ol cash Mows.

PD- Probability ot delault

PRA: Prudential Regulatory Authority

Pre-provision profit/(loss): Represents loial nel icvenue less noninterest expense The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income m excess of its provision for credit losses

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs aie taken into consideration ll is one basis upon which management evaluates the performance of AWM against the performance of their respective competitors

Principal transactions revenue: Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing lo buy a financial or other instrument and the price at which the Firm ts willing io sell thai instrument, it also consists ol realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities)

Principal transactions revenue also includes certain realized

Glossary of Terms and Acronyms

and unrealized gains and losses related to hedge accounting and specified risk-management activities, including (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specilic nsk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity nsk, and (c) other derivatives.

PSU(s). Performance share units

RCSA: Risk and Control Self-Assessment

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes

REIT: "Real estate investment trust": A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate relaled assels by pooling their capital io purchase and manage income property (i e., equity REIT) and/or mortgage loans (i.e., mortgage REIT) REITs can be publicly or privately held and they also qualify for certain favorable tax considerations

Receivables from customers: Primarily represents margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned

Reported basis: Financial statements prepared under U.S GAAP, which excludes the impact of taxable-equivalent adjustments

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking tees generated across the industry (i e, the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications Source: Dealogic. a third-party provider of investment banking competitive analysis and volume-based league tables lor the above noted industry products

RHS Rural Housing Service of Ihe U S. Department of

Agriculture

ROA. Return on assels

ROE: Return on equity

ROTCE: Return on tangible common equity

RSU(s). Restricted stock units

RWA: "Risk-weighted assets'- Basel ill establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel ill Advanced, also operational risk Key dillerences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel in Advanced, credit risk rwa is based on nsk-sensiiive approaches which largely rely on the use of internal credil models and parameters, whereas for Basel ill Standardized, credit risk RWA is generally based on supervisory rrsk-weightings which vary primarily by counterparty type and asset class Market risk RWA is calculated on a generally consistent basis between Basel ill Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5

S&P: Standard and Poor's 500 Index

SAR(s): Stock appreciation rights

SCCL. single-counterparty credil limits

SEC: Securities and Exchange Commission

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention ol ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale ts a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage, and the relaled lien is released upon receipt of such proceeds

Single-name: Single reference-entities SLR: Supplementary leverage ratio 5MBS: Stripped mortgage-backed securities SOA: Society of Actuaries SPEs: Special purpose entities

Structural interest rate risk: Represents mtciest rate risk of the non-trading assets and liabilities of the F-irm

Structured notes: Structured noles aie predominantly financial instruments containing embedded derivatives.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to banki uptcy or loss mitigation Includes both judicial and non-judicial states.

Taxable-equivalent basts: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis Accordingly, revenue from investments that receive tax cicdils and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities, the

corresponding income tax impaci related io lax-exempt items is recorded within income tax expense. TBVPS: Tangible book value per share TCE Tangible common equity

TDR. "Troubled debt restructuring" is deemed to occur when the Firm modifies the original terms of a loan agreement hy granting a concession to a borrower that is experiencing financial dillicülty TLAC: Total Loss Absorbing Capacity U.K. United Kingdom

Unaudited: Financial statements and mlormation thai have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion

U.S.: united States of America

U.S. GAAP- Accounting principles generally accepted in the US

U.S. government-sponsored enterprises ("U.S. GSEs") and U.S. G5E obligations, in the U.S . GSEs are quasi-governmental, privately held entities established by Congiess to improve the flow ol credit to specific sectors of the economy and provide certain essential sei vices to the public. U.S GSEs include rannie Mae and Freddie Mac, but do not include Ginnie Mae. which is directly owned by the US Department ol Housing and Urban Development US GSE obligations are not explicitly guaranteed as to the umely payment of principal and interest by the full faith and credit of ihe U S government

U.S. LCR: Liquidity coverage ratio under the final U S rule

U.S. Treasury: U S Department of the Treasury

VA. U S Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of Ihe dollai amount ol potential loss from adverse market moves in an ordinary market environment.

VCG: Valuation Control Group

VGF: Valuation Governance Forum

VIEs. Variable interest entities

warehouse loans: Consist of pnme mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets

Washington Mutual transaction: On September 25. 2008, JPMorgan Chase acquired certain of the assets ol the banking operations of Washington Mutual Bank ("Washington Mutual") from the TDIC.

jr>Uor|[ap Cluse S (n./2

Securities portfolio

For inhumation regarding the securiiifs portfolio as of December 31 2016 and 20! 5. and for the years ended December 31 2016 and 2015. see Noie I? Foi the available-for-sale securities ponlolio. at December 31. 201*. tne fan value and nmor-jzed cost of U s treasury and government agency obligations was $79 0 tnihon and $76 7 hillion. lespecbvelv. [he la-r value and amortized cosi of all other available-for-sale securities was$219 8 Dillion and $214.3 billion, respectively, and the total fair value and amortized cost of me total availab'e for-sale securities ponlolio was $298 8 billion and $291 0 billion, respectively

ai Decemher 31. 20M. the fair value and amortized cost of U S Treasury and government agency obligations m the held-In-maiiirily securities portfolio was $40 3 billion and $39 0 tnihon. respectively: the lair value and amortized cost of all other MTU securities was $ 10.8 billion and $ 10 2 billion, respectively, and (he rolal fair value and amortized cost of the total held-to maturity securities portloho was $1.1.? billion and $19 3 hillion. respectively

Ihe ;abli- below pri/v.-nss Wans hy poitluhu segment and loan class thai are nrr-scmed in frpili; pages 89-oʳ, jnc ::ai;e ifi and in Notf M a; tin: oeriods indicaiefl

oOS<8 i 112 JH

Pftemhi.1 Ji (.r,nullwflii	201*	?01i	201«
US consumer excluding ciedn card to ant			
Hume fuuitt	S 51965 1		
aewH'n:i*! mnngaij!-	215,171		
»i;lo	65.11*		
Total U S com unit			

Management on oai;e 86.

7t, 710 s
i ;<> 008

Total credit cud loans

U S wholesale lo.
Comme'ciai and i

90.542 104,791

12,655 69,774

S3 739 90 836

7.S74 49 B3S

11 OAT f1 316 48 158

77 900 S9.360 10.708 7.96,! 50 948
ro<»' u S. wholesale loam
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I mania' inclusions Governmen: ^niri'S

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14,7*1 3.726
39,611

34,782 2 224
21 099
Z0S.S6V

26.S64 1 S8C.

93.127

Total wholesale loam
Commercial and iivJusirial Real esta'.v Imanoalmsinuiions Cover nment agencies

total wholesale loans
l21.S77 101,755 32,207

114,124 95 413
29 8*0 11 6/6 109.956
361 015
1*4,765 i 837.299 1

113.446 79 246 34.842 8.696 94.684
3J0.V;

61 126 37.272 O.S48 90.063)13 183 733.796

2.62S I
2.210

12 230 J 2,011

TnijJ luim held-for-sale and leans at fair value

1 loans (othei in.m nurchaied credit impaired bans and ihnse tor which il* t.u< value option have twen elected) are presented net of unearned income, unamortized rliicounn and premiums and nel deterred loan costs. these amounts weie not maierial as ol December 31 2016 2015, 2014, 701J and 2012

Maturities and sensitivity to changes In Interest rates
The table below sets forth, at December 31, 20] 6. wholesale loan maturity and distribution between fixed and floating interest rates based on the stated terms of the loan agreements. The table below also presents loans by loan class that are presented in wholesale credit portloho on pages 96-104 and Note 14 The table does not include the impact of derivative instruments.

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(a) includes demand kuns and overdrafts

Risk elements

The following tables set forth nonperforming assels, contractually past-due assets, segment and loan class that are presented in Credit Risk Management on page B8, indicated

and accruing restructured loans by portfolio pages 89-90 and page 96, at the periods

ISIU t

(a) Represents accr Mint Iw-is uasi-due oo days o: mote as lo principal and inierrn. wtiich are not charactwized ai nonaccrual loam. deludes prj loans winch aie accounted '{>' or- a puol basis Since enJi nuni is accounted lor as a single asset with a single composite inferos! rate and an aggregate npeciation ot casli (lows, inr past due status ol 1'ie pools, or that ot individua" loans within the pools, is rmt meaningful The mm Is recognizing interest income on each poo) of loans as :>iey are all performing

tb> A! Oecember 31. /Olt 201S. 2014. 2013 and JOIZ, eicluoed loans 90 oi more days past due arvj siill accruing as follows. (1) mortgage loans insured byUStuvernment afenciesof S2 7l>!lion 12 8 billion. S3 4 billion. S3 2 billion and JJ.B billion, respeciively. and (2) student loam insured by US. fovernment agent lei undei thcrrcLPof J763 million. J290 million. Ho/ million. J428 million and S525 million, respearvely (hese amounts luve been excluded fiom the nonaccrual loans based upon ttie government guarantee. Pilot pemd amounts have iMrtn irnied to conform with tun nil pernd

TMal u.L

Miuurvw

ceauatr

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Commercial

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(al Represents on foi minj loans modified in IOHun wtucli an economic concession was granted by the firm and tlie borrower hai demonstrated its ability io repay Ihe loans accordincto the terms of the restructuring, as defined in u S. GAAP, concessions include the reduction n(interest rates oi the deferral of interest c* principal paymeres. iesultin| Irom deterioration in the boncmers' Nrunrial condition. Excludes nonaccrual assets and contractually past-due assets, which aie intltirterl in the sections aliove.

(b) includes drill card loans that ha*e been morJifiiiJ in a TDK

For a discussion ol nonaccrual loans, past-due loan accounting policies, and accruing restructured loans sec Credit Risk Management on pages 86-107, and Note 14

Impact of iionac'ou.

from accruing resiiurturetl 10; recorded on such loans accord under the modified terms The

s the difterenre between the amount ot i mg to their original contractual terms hac

.■presents the difference between the amount of interest mcome thai would ha' o their original contractual terms and the amount of interest that actually was iwmg table sets forth this data for the years specified. The change in forgone ir tas primarily dnven by the change in the levels of nonaccrual loans

y been iconic

Cross-border outstandings

Cross-border disclosure is based on the FFIEC guidelines governing the determination of cross-border nsk. The reporting of country exposure under the FFIEC bank regulatory requirements provides mlormation on the distribution, by country and sector, of claims on. and liabilities to, foreign residents held by U.S banks and bank holding companies and is used by the regulatory agencies to determine the presence of credit and related risks,

including transfer and country risk. Country location under the FFIEC bank regulatory reporting is based on where the entity or counterparty is legally established. JPMorgan Chase's total cross-bonier exposure tends to fluctuate greatly, and the amount of exposure at year-end tends to be a function of timing rather than representing a consistent trend For a further discussion of IPMorgan Chase's country nsk exposure, see country Bisk Management on pages 108-109.

The tables below summarize the changes in the allowance for loan losses and the allowance for lending-related commitments during the periods indicated For a further discussion, see Allowance for credit losses on pages 105-107, and Note is

Allowance for loan losses

• V "■":,rr-" ,":;;r" i,;:rr" ,'O'V;rr

Ihe following table lists all countries in which JPMorgan Chase's cross-border outstandings exceed 0.75% of consolidated assets as of the dates specified.

1

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S-S

J j J J J

Summary of loan and lending-related commitments loss experience

Allowance foi tending-related commitments

i'ended Dec emoei U (w millions)

balance al Mpnmni; o' Tf"' Provision lor lending ielalM commim
Hfi CIUIfT-plfS

Other
Attract- Ikilinca

I ne It)llniin>e tatii-? nrovidfs „• summary o! Hie average balances and average iniofesi tales nf IPMorgan Chase s dcposr.s foi uif years indicated

Avenge interest i*te%

ear ended Det.tTtin 11.

m miliiom. enepf ime'rst rai‹i 2016

t }U 5:i 1 «m 14!

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7A7 3IS 1
837.299

739 17S » 77.0450 t 722.3SA

757.336 738.41B 733 79b
4 759 S 802 9 063

Total allowance lor loan losses

D54H 34 06
0t<!<% 0 61%
33 55 35 67
Nman.iiial loans

Net charge ntli to. I flans re:a-neJ - average Allowance loi loan losses

Allowance for loan losses to-1 oans retained ■ year-end" •Mnaccmal loans retained

(a) There weie none: cha'ge-iifls/(recoveries) on lending.relatedconmitmenKin 2016. 20IS. 2014. 2013 or 2017 (ti) The allowance lor loan losses as a percentage ol retained loans declined from 201Z to 2016, due to an improvement in credit quality of wlwleule credit portfolios For i moie detailed discussion of the 2014 through 2016 provision lor credit kisses, see Prcmsitr: tor credil
total interest beating deposits
total deposits in U S offices

4S9 |(|6 86.007

m il S offices mintoresi bearing
nemand" Savincs"

0 1] 0 08

167.760 19^.017 53,716 46.067

Total intnest-bearingni
al deposits in non-U.S otfici

At December 3] 201 o. othei Il b time deposits in denominations of 1100.000 or more totaled SI 1 8 billion, substantially all of which mature in three months or less tn addition, the lahle below presents the maturities for u S time certificates ol deposit in denominations of (100.000 or more

	-	, Over three	Oversii		
	TTireemonths.-. _ but wiitunsH' . butwiiriin 12		Over 12		
.■ ■■	■' orless"'	. monitHC.'>	■months...	■ morths	Total '■'
al de!K>Sil (1100 000 or more)	f 4.607 t	4,4(7 *	2.691 t	S.V66 t	17,746

Short-term and other borrowed funds

165,666 171.720 107.211 DJO%

1 152.678 192.510 212.112 019%

0 32

The following (able provides a summary of JPUorgan Chase's short-term and other borrowed funds for the years indicated

_to tJytw the ye* eiyJtfDecerrt^ ■^i<V,^^/i^.)\-^~'lvlt-:\\ ^s-^'.?*.'-:»i4

Federal funds purchased and securities loaned or sc

Balance at year-end

Aver age daily balance dunng the year

Maximum month-end balance

Wearied-average rate at Member 11

15.001 19,083 1.13%

1S.S62 38.240 64,017 0 55% 0 29

weighted-average rate during the year

■9,154

«.2S2 102,310 1.79%

80.126 93,001 99,226

1.89%

1 B4

Balance al yeai-end Average daily balance during Ihe year Maximum month'end balance Weighted average rate at December 31 Weighted averice rate during the year

Other borrowed funds.-*

BatarKf at year-end

Average daily balance during the year

1 93

Uaximum month-end balance

weighted average lateat December 31

Weighted average rate during (he year

NON EXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

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In (he normal course of business. JPMorgan Chase trades noneachange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observahle market parameters. The Firm's nonexchange-liaded commodity derivative contracts are primarily energy-related. The following table summarises the changes in fair value for nonexchangc-lraded commodity derivative contracts tor the year ended December 31, 2016

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Stiort-rerm beneficial Interest 1.™

Commercial paper and other borrowed funds.

Balance a: year'end

Awi age daily balance during the yeai

Maximum nionlli-tnd balance

weighted average rate at Oecember 31

Weighted-average rate during the year

5,688 •,296 10,494

0 67

11,372 15.608 17,137

041%

0 32

17,026 0 23% 0 30

Federal funds purchased represent overnight funds Securities loaned or sold under repurchase agreements generally mature between one day and three months Commercial paper generally 15 issued in amounts not less than $100,000, and with maturities of 2 70 days or less Other borrowed lunds consist of demand notes, term federal funds purchased, and various other borrowings that generally have maturities ot one year or less

Signatures

Signatures

Pursuant to the reauiremenis of Section 13 oi 15(d) of the Securities Exchange Act of 1934. the registrant has duly caused ihis report to he Signed on behalf of the undersigned thereunto duly authorized

JPUorgan Chase & Co (Registrant)

By AyjAWts niMON

Exhibit 10.23

JPUORGAN CHASE B. CO LONG-TERM INCENTIVE PLAN TERMS AND CONDITIONS OF JANUARY 17. 201 7 PERFORMANCE SHARE UNIT AWARD OPERATING COMMITTEE (Protection Based vesting Provilions)

February 28. 2017

Pursuant to the requirements of the Securities Exchange Act of 1934. this repori has hecn signed below by the following persons on behalf of the registrant and tn the capacity and on the date indicated JPUorgan Chase & Co does not exercise the power of attorney to sign on behalf of any Director These ten:is and conditions are made n.irt ol tne Award Agreement dated as of January 17 2017 ("Cram Date") awarding per lor nunc t> share unit". ("PSUs") pursuant to the terms o! the JPUorgari Chase & Co Long-Term incentive Plan ("Plan") lo (tic extent trie terms of tne Award Agreement (aft references to which will ireluoc lhese terms ana conditions) conflict wiihtiiel'ian. inc Plan will govern The Award Arjieemeni. the Plan and Pros next us supersede any oinei agreement, whether wriiten or oral that mav have hcen entered into try the Tirm and you relating io this award

llirs ow.i 1(1 was grained on the Gram Dais subteci tn the Award Agreement and Plan Unless you decline bv the deadline and in the manner specified in the Award Agree mem, you will have agreed to be bound by these term! and conditions, effective as of the Grant Date i! you dec I in* the award it will be cancelled ai of the Grant Date

Capacity

/S/ JAUCS DIMON

(James Dimon)

/S/LINDA B BAMUANN

ftinda B. Bammannl /S/JAMES A BELL

(James A. Bell) /5/CRANDALLC BOWLES

(CranoallC Bowles) /S/STEPHEN B BtJRKC

(Stephen B Burke) /s/ TODD A COMBS

(Todd A Combs) /V JAMES S CRQWN

(James S Crown)

/S/TIMOTHY P FLYHN

(Timothy P Flynn)

/S/ LABAN P JACKSON. IR

(Laban P. Jackson, jr) /V MICHAEL A NEAL

(Michael A Neat) /VICE R RAYMOND

(Lee R. Raymond)

/S/ WILLIAM C. WELOON

(William C weldon)

/S/ MARIAHNE LAKE

(Marianne Lake) /S/ NICOLE GILES

Director, Chairman and Chief Executive Officer (Principal Executive Officer)

Executive Vice President and Chief Financial Officer (Principal Financial Officer)

Managing Director and Corporate Controller (Principal Accounting Officer)

rorm and Purpose of Award

ruble right to receive one share o' Common Stock as of the vesting date as sei lorth m

il dividends arc paid on Common Slock while restricted Stock units under (his award are outstanding, you will be cmrl an amou": equal to (he dividend paid on one share of Common Stock, multiplied by (he number ot restricted slock units ouls:,ir:d::ig under Tins award

This award is intended ;mri expected (o vest on the vesting date, provided that you are continuously employed by the F irm througr such vesting daie or you ncei the requirements lor continued vesting described under lhe subsections '--job Elimination," *--fuli Career Unjitnlilv." "-Gowrnment Office* or "-Disability" However, vesting and the numaer of PSUs i-iai wiii vest are suhject to mcse terms and condmons (including, bul noi limited to. w.iions captioned "RKont.H'-iL Provisions." "NiimpcLIQ VesL"l\ VEST. ™J;J late," "Remedies" and Hie following protection-based vesting provision]

UO to a iota' ol fifty percent ol your award (including any associated Reinvested Dividend Lquivalcril Share units) thai would oinerwise be d-sin billable id you on ihe vesting dale ("Al flisii PSUs") may r* cancelled if the chief CawuUve Office.' ol JPUorgan fnase ("1(0*1 determines in Ins or her sole discretion that cancellation ot all or poibon ol the At Risk PStls is appiopriaie in light ol any one or a combination of the following factors.

Your performance in relation to the pnorities lor your position, or the Firm's performance in re la I ion to the priorities for which you share res ponsioilityasa member of the Operating Committee, have been unsatisfactory tor a sustained oenod of time Among the 'actors the CLO may consider in assessing performance are nel income, total nei revenue, earnings per share and capital ratios of Ihe Firm, both on anabsoluie basis and. as autiropnate. relative lo peer firms.

HSU awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct oi indirect responsibility, were in whole or m pan cancelled because the Line of Business did noi meet its annual Line ot Business Financial Threshold

lhe Tirm does not meet the Firmwide Financial Threshold

ror avoidance of doubt, cancellation cri the At Risk PSUs. in whole or pan. for one or more ol the above lac tors may occur prior to the end ot the Performance Period and the maximum number of At Risk PSUs subject to cancelation prior to the end of Ihe Performance Period will be up to fifty percent of the Target Award Number

in the event that your employment terminates due Co "Job Elimination," "Full Career Eligibility." "Government OHice" or 'Disability' thereby entitling you to continued vesting In your award, (or potentially acceleration due to satisfaction of Ihe Government Office Requirements), (lie cancellation Circumstances described above will continue to apply to your At Risk PSUs pursuant to lhe section captioned "Accelerated Distribution lor Ethics or conflict Reasons Resulting from Employment by a Government Entity

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee ol tlie Board of Directors of JPUorgan Chase ('Committee") in the case of an award to the CEO. all such determinations shall be made by the Committee

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i Subject to any cancellation in whole or part of your award pursuant to these terms and conditions.

Performance calculation. On the vesting date, you will vest in a number ol psus derived by dividing the sum of the number of the Annual PSUS bv the number of years in the Performance Penod See sections captioned. "Calculation of Performance Ranking' and * Definitions."

you will also vest in additional shares of Common Stock as calculated under the section captained. "Reinvested Dividend Equivalent Share Up Hi-* Delivery ol vested shares to your account will be made not later than the date specified in (he last sentence oi the subsection captioned Section 409A Compliance.

if dividends are paid on Common stock during the Vesting Period while the award is outstanding, you will receive on the vesting date additional units representing shares of Common Slock as calculated in this section. The number, if any, will be based on (hedivirJr**h(hai would have been paid during (he Vesting Penod as of each drwjend payment date on the actual number ol sharesofComrrKmStockdistributabletoyou rT^ltingtromthevestingotthe PSUs.it <http://PSUs.it> any, and treated as reinvested m additional sham ol Common Stock on each dividend payment based on the Fair Uarkct value of one share of Common Stock on each dividend payment date ("Reinvested Dividend Equivalent Share Units')

As of the vesting; date set forth in your Award Agreement, you shall be entitled to be issued a number of shares of Ihe Common Stock of JPUorgan Chase equal to the number of PSUs, plus any additional Reinvested Dividend Equivalent Share units, vetting on such date, less (he number withheld ta satisfy tax withholding nh ligations. The net number of shares issued (o you will be held in an account in your name with restrictions preventing you from transferring, assigning, selling, pledging or otherwise encumbering such shares for a two year period commencinc. as of (he vesting date and ending as of the second anniversary of the vesting date. Such restrictions shall only Lapse, prior to ihe expiration of the two year holding period, in the event of your death or for an accelerated drstnbutnn for ethics or conflict reasons. Sec section captioned, 'Death" and subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"

For purposes of the Performance Ranking, the Ranking of the Firm and of each Performance Company for each year in the Performance Period shall be determined and calculated by the Calculation Agent, using the definitions of "Annual PSUs.* *R0TCE." "Average Tangible Common Equity," (II otherwise applicable) "Firm Reported ROTCE* and 'Performance Table" (including its footnote) as set forth in the Definitions section of these terms and conditions. See section captioned. 'Definitions" Except for Firm Reported ROTCE, calculations will be expressed as a decimal to the second place 0 c xx.yy%) See section captioned. 'Definitions-Performance Table* in the event of a tie All performance based calculations asset forth herein are binding and conclusive on you and your successors.

The period from the Grant Date to the vesting date is the "vesting Period" (See "Administrative Provision-Amendment" pursuant to which the Firm may extend the vesting period and "no Ownership Rights' pursuant to wtiich the Firm may place restrictions on delivered sham of Common Stock To I lowing trie vesting dale and section captioned, "Holding Penod' above)

In consideration of the grant of this award, you agree that you are subject to the JPUorgan Chase Bonus Recoupment Policy (or successor policy) as in effect from time to Lime as it applies both to the cash incentive compensation awarded to you lor performance year 2016 and (o (hri award Vuu can access ChiMJohcyascurrcndy m effect through (he following (int.

h(l o://www iDmorganchasc.com/corpoi <http://iDmorganchasc.com/corpoi> ti e/A rjou I-J PUC/cor oorat e-gover na nee-principles, hi rni recoupment

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Tirm under the JPUorgan Chase Bonus Recoupment Policy (or successor policy).

Notwithstanding any terms of this Award Agreement to the contrary. JPMorgan Chase reserves the right in its sole discretion lo cancel up to 100H of your award (for (he avoidance of doubt, including any associated Reinvested Dividend L qui vale nt Share Units) and, lo the extent set for th in "Remedies* below, to recover from you up to an amount equal lo (he ran Market Value (determined as of (he vesting date) of ihe gross number ot shares of Common stock prcwc*-sly distributed (including vested shares subject to the Holding Requirements and shares withheld for tax purposes) under (his award il the Firm in us sole discretion determines that.

you engaged in conduct detrimental to the Firm molar as it causes material financial oi reoutational harm io ihe Tirm or its business activities, or

this award was based on materially inaccurate perlormance metrics, whether or not you were responsible for the inaccuracy, or

th:s award was based on a material misrepresentation by you. or

you improperly or with gross negligence (ailed to identify, raise or assess, in a timely manner and as reasonably expected, nsks and/or concerns with respect to risks material to the Firm or its business activities, or

your employment was terminated for Cause (see section captioned 'Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated lor Cause

See section captioned 'Remedies* below lor additional information.

JPUorgan Chase's right to cancel and/or recover the value of this award (or any cash bonus) under the JPUorgan Chase Bonus Recoupment Policy and (he other provisions of this award relate to the "organcattonal goals" of the Firm as that term is defined by regulations issued under Section 409A ot the Internal Revenue Code ("Code")

unatlonof Except as explicitly set forth below under the subsections captioned "-Job Elimination.' "-Full Career Eligibility." "•-toyment Government Office" or '-Disability" or under (he section captioned "Death." this award (for avoidance of doubt, including any associated Reinvested Dividend Equivalent Share Units) will be cancelled in full effective on the date your employ mom with ihe Firm terminates for any reason

SubjerJ to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting." "Number to vest on vesting pate," 'Bonus Recoupment." "Recapture provisipns" "Ptmerjifis." and "Your Obligations.*) you will be eligible to continue (o vest (on the original veiling schedule) with respect to your award in accordance with its terms and conditions following lite termination of your employment if one of the following circumstances applies to you

> Job ip^Liimirialion Elimination

in the event (tut the Director ol Human Resources or nominee in his or her sole discretion determines thai the Firm lerminated your employment because your job was eliminated, and

after you air notilied lhat your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and

you satisfied the Release/Certification Requirements set forth below

V Full Fy]] Career Eligibility Career Eligibility m the event that the Director of Human Resources or nominee in his or her sole discretion determines that

you voluntarily terminated your employment with (he Firm, had completed at feast frve years of continuous service with the Firm immediately preceding your termination date, and the sum ol your age and Reiognued Service (us delined below) on your date of termination equaled or exceeded 60. and

you orovidcd at least 90 days advance written notice to the Firm of your intention to voluntarily terminate your emnloymem under ihis provision, during which notice period you provided such services as requested by (he Firm in a cooperative and professional manner and you did not perform any services for any other employer, and continued vesting shall be appropriate, which determination shall be made prior to your termination and will be based on your performance and conduct (belore and after providing notice), and,.

tor 36 months from the date of grant of this award, you do not either perform services m any capacity (including self-employment) for a Financial Services Company (as delined tie low) or work in your orof ess ion (whether or not for a Financial Services Company), provided that you may work tor a government, education or Not-tor-profit Organization (as defined below), anfl

you satisfy the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may ctioose to have you continue to provide services during such 90-day period as a condition to continued vesting or shorten the length of ihe 90-day period at the Firm's discretion, but to a do if no earlier than the date you would otherwise meet the age and service requirements

Additional advance notice requirements may apply (or employees subiect to notice period policies. (See "Notice Period" below.)

> Government Govern mem Office[1]

°‴ce jo the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidatefor an elective Government OHice, as described at the rnd ol these lerms and conditions under the sect ion captioned "Government Office Requirements." See also definition of Government Office in the section captioned "Definitions."

• > Disability Disability

in the event that

your employinenl with Ihp Firm terminates because [ij you are unable 10 return to work while you are rrceivirg benefits under the JPUorgan Chase Long Term Disability Plan, or lor non-u S. employees, under the equivalent iPHorgan Chase-sponsored local country plan (in either case, "LTD Plan"), or (u) il you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm, provided that you (x) request in writing continued vesting due (o such disability within 30 days ol the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive (lie Firm's written consent to such [re arment. and

you satisly ihe Release/Certification Requirements sei forth below

Hei icm-r.atHjr r>: vcur "iniiiwimni under flnv e and deliver i release ol cams ir. iaw< ol Un;

witn resoeti 10 Full Career Eligibility, prior 10 ttic leimination ol vour employment, woo musi confirm witn management 1 rial you meet tne eligibility criteria (including providing ai Icasi 90daysadvancewiiuvn nuiiiicanon). advise that you are seeling to ue treated as an individual eligible lor Fun Cant." Elipib'iuv a»d receive wriiti-n consent io such continued vesting

nice and documentation desuiuci! dwvp and receive wr lien

with iespw.1 to "Full Career Cligibilnv" 11is your lesponsibilitv to take lhe appropriate sieosiocefiilyloili* Firm linen 111 (be vesting date while lhe employment restrictions are outstanding on the authorized lorm of the Firm that you have complied with Hie employment restrictions applicable to you (as described herein) lrom you' d.ne ol (rrruination o' employment through [Me applicable vesting date, and

ir all cases. 01 her wise complied with all other terms ol ihe Award Agreement (See section captioned "Yciiir.QJjlif ,iiions~ below)

Il vou die while you are eligible to vest in this award, your designated beneficiary on file with the Firms Stock Admimsiianon Department (oryoui estate or il no beneficiary has been designated or survives you) may he entitled to receive a disinbulion ot a number nl shaies of Common Stock associated with your award The Target Award Percentage m the case o' rliwtn is based on tne Number to vest on the vesting Date calculation described above for each comtiieted calendar year m tin-Performance Period and using lhe Tared Award Percentage equal to 100 percent for any remaining calendar years in lhe Performance Period.

in addition your beneficial y or your esJaleshall receive additional shantsof CommonSiock.i.e Reinvested Dividend equivalent Share units, as set forth in (lie set l ion captioned. "Reinvested Dividend Equivalent Share Units' but based on dividend equivalents uo to the date ol your death

Any shares will be distributed no later than the end ol lhe calendar year immediately following the calendar year which contains your date ol death, rwwever. our administrative practice is to ippster such shares in the name ol your beneficiary or estate within 60 days of (he Firm's receipt of any required documentation.

■ f Non "Ton will nol either during you' employment with lhe Firm or tliceafter maKe or encourage ntlie'5 ic ma*c any

D-snaraiemeni puotc s:atemenl or release any infoinaiion in verbal written electronic or any otner lorm lhai n intended io or

reasonably could be foreseen 10 disoarage. err.Dorrass or cimcize tne Firm or us employees officers anectors

01 sriaienoldcrs as a group This shall not preclude you from reporting io the Fum % management or oircctors or

10 the government or a regulator conduct you believe to be m violation of the law or the Firm s Code of Conduct

01 lesponoing truthfully to questions or requests for information to the government a tegulaioi 01 in a court ol law

vith a legal or regulatory investigation or proceeding

'- Cooperation vou will cooperate lully with and provide lub and accurate information to the Firm and us counse: wuh respect to any mailer (including any audit, pioceeding litigation, investigation or governmental proccedine) wiih rwpeci to which you may nave Knowledge 01 iniormaiion subiect to remihurseméni lor actual appropriate and reasonable oui-of-pockei expenses incurred by you ,

■ 'Compliance vou will pmvirle ■ lit-1 inn with any information reasonably requested in d etui'nine compliance witn the Award Agieemcni with Award .imlvouautlonze Hie frm to disclose tne terms of the Award Agreement to any third parly who nugnt he aMeaea thereby Agreement '"dueling your prosper live employer v Notice Period 1! you are subiect to a nonce period 01 become subject to a nonce penod after the Gram bale, whetliei by conirart or py ixluv ir.ai requires you to provide advance written notice of your intention to terminate your employment ("Nonce Period") tr.en as consideration fni Hut awaid and continued employment you will provide ihe Tirm with the necessary advance wr men nonce thai applies :o vou as specihea by such contract or policy

Alier leceiot of your notice, the Finn may choose to have you continue to provide services during (he applicable Notice Period or mav place you on a paid leave tor all or pan of (he applicable Nonce Period During (he Nonce Period, you shall continue to devote vow full tn:" and loyalty to the Turn hy providing services in a cooperative and professional manner and not pciIormany'jeiviceslor any other employei and shall receive your base salary and certain benefits until your employment imnmates Vou and the 1 inn may mutually agree Ic waive or modify the length of (he NoiKf Penod Rega'dless of whetriei a Nubre Period ayjlies to vou. you must comply witn me 90-day advance notice period described under the subsection captioned "■■ Full Career Eligibility" in (he event you wish 10 terminate employment under thai samp subsection

Obligations In consideration of the grant ol tms awaid. you agree to comply with mid tie bound bv (lie obligations set forth below nes; to the subsections captioned '--Non solicitation ol Employees and Customers," "-Confidential Iniormaiion," "- Non Disparage me ni." "-Cooperation." "-Compliance with Award Agreement," and "-Nonce Period"

■ > Non- (Xiringyrjuremplrjyinenirjvilwfirman Solicitation or, (11) if your award is not cancelled as of your termination date, the three year penod from Gram Date, you will noi dnectly . or mdirccify, whether on your own behalf or on behalf of any other party, without the prior written consent of (he Director of Human Resources (1) solicit, induce or encourage any of Ihe rirm's then current employees to leave the Firm or to apply Employees tor emp|oynfort | elsewhere. (11) hire any employee or former employee who was employed hy (he Firm al the dale your and employment terminated, unless tix. [1] individual's employment terminated because his or her job was eliminated, or Ihe Customers indrvidual's employment with the Firm has been terminated for more than six months, (in) lo the fullest extern enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert fiom doing business with the Firm, arty then current customers, suppliers or other persons or entities (hat were serviced by you or whose names became known to you bv virtue ol your employment wilh the Firm, or otherwise interfere with the relationship bet ween the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customeit ihai you service after your employment with the Firm without the use of Ihe Firm's confidential or proprietary information

These restrictions do not apply to authonied actions you take m the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firms policies.

1 I- addition 10 the cancellation provisions descriDed unoer tne sections cannoned ■ponus.Rrtuiijiiiieiil." "P.oiecuon-Baseu vesting "lcrminat.onol Employment" and "ft eta :U tug Provisions," your outstanding PSUs under tmsaward may be cancelled if me'l-irm in us sole "discretion determines Ihat

or employment restrictions

vou have (ailed to return the requned forms specified under the sot 1 ion captioned "ReleaseAerllLuhQ'i' by the specified deadline, oi

you have violated any of ihe provisions as set forth above in tne section captioned "Your Obligations" lo the extent provided under the subsection captioned "-Amendment" below. JPUorgan Chase reserves Ihe right to suspend vesting oi this award and/or distribution of shares under this award, including, without limitation, during any period thai IPuorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions fen crisisibiiroiis of shares under this award aresatislied Ihe Tirm is nut respons.blc for any price (luctujtions during any DfinorJ of suspension and. if applicable suspended units will be reinstated consistent with Plan administration procedures See also "sdrlimaratiye Provisions.-No Ownership Bights "

• > Confidential You will not, either during your employment with the Finn or thereafter, directly or indirectly (1) use or disclose to anyone Information any confidential information related to the Firms business, or (11) communeate with the press or other media about matters related to Ihe Firm, its customers or employee-;, including matters and activities relating to your employment, or (he employment ol others, by the Firm, in the case of either (1) or (ii), except as explicitly permitted by the JPUorgan Chase Code ol Conduct and applicable policies or law or legal process in addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information' shall have the same meaning lot the Award Agreement as it has in Ihe JPUorgan Chase Code of Conducl.

Nothing in this award precludes you Irom reporting lo ihe Firms management or directors, the government, a regulator, a self-regulatory agency, your attorneys or a court, conduct you believe to be in violation ol the law or concerns ol any known or suspected Code or Conduct violation It is also not intended to prevent you from responding truthfully to questions or requests From the government, a regulator or in a court of law

■ > Recovery in addition, you may be required to pay the Firm up to an amount equal to the Fair Uarket Value (determined as of tne applicable vesting date or acceleration date) of the gross number of shares of Common St«kpreviouslyrlisinbuted.including vested shares subject lo the Holding Requirements, under this award as follows:

Payment may be required with resi>ect to any shares of Common Slock distributed within the three year period prior to a nohce-of-recovery under this section, if (he Firm in its sole discretion determines that

you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment,

you violated any ol the provisions as set forth above in the section captioned "Y^[jMgattoni." or you violated the employment restriciions set forth in the subsection Full Career Eligibility following the termination of your employment.

tn addition, payment may be required with respect 10 any shares distributed within the one year period prior to noticMf-rtKovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions in the subsection captioned "Recapture Provisions"

Nolice-of-recovery under this subsection is a written (including electronic) notice from the Firm lo you either requiring payment underthissubscaion or statingft^^ Without limiting the foregoing, nobce-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic! notice at your last known address maintained in the Firm's employment records. For the avoidance o(doubl. a noiice-of-recovery that the Firm is evaluating requiring paymeni under this section shall preserve JPUorgan Chase's n^ts to require iMymeniassetforthabovc in all respects and the Firm shall be under no obligation 10 complete its evaluation cnlicr than as the Firm may determine tn its sole discretion

For purposes of this section, shares distributed under this award include shares withheld tor tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this section with respect to shares that are or may be retained by you following a determination of tax liability and Ihat you will not be required to pay amounts with respect to Sham representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credil. refund or other benefit) Accordingly. JPUorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares ol Common stock or in cash. You agree that any repayment will be a recovery of shares 10 which you were not entitled under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty. You also acknowledge that a violation or attempted violation ol the obligations set forth herein wilt cause immediate and irreparable damage to the Firm, and therefore agree that the Fir m shall bo entitled as a matter of njthi to an injunction, from any court of competent jurisdic l ion, restraining any violation or fur (her violation of such obligations, such right to an injunction, however, shall be cumulative and in addition to what eve rot her remedies the Firm may have under law or equity

Nolhing in ihe section in any way limits your obligations under "Bonus Recoupment"

Administrative Provisions Withholding Taxes. The Firm, in its sole discretion, may (1) retain from each distribution the number of shares of Common stock required to satisfy applicable tax obligations or (u) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to Ihe vested Shares and the award Tins may include but is not limited to (1) a market sale ol a number of such shares on your behalf substantially equal to the wirnholding or other taxes, (n) to Ihe extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to Ihe award and snares that vest under this award, and (m) retaining shares that vest under ihisawarduntil you pay any taxes associated with the award and vested shares directly to the competent authorities.

Right to Set Oft- The Turn may, (0 the maximum extent permitted by applicable law (including Section "CM of ihe Code to the exieul it is applicable to you), reiam For itself funds or (he shares of Common Stock resulting Irom any vesting of this award (0 satisfy any obligation or debt that you owe (0 the Firm Notwithstanding any account agreement with the Firm to (he contrary, the Finn will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed byyou unrJorthisaward without your consenL Tbts restriction on [he Firmdoesnor apply (oaccountsdescribedand authorised in "No Ownership Rights' described below

no Ownership Rights. PSUs do not convey (he rights of ownership of Common Slock and do not carry voting rights. No snares of Common Stock will be issued 10 you until after the number of PSUs have been determined, if any. and have vested and any applicable restrictions (other than Holding Requirement) liave lapsed Shares will be issued in accordance with IPuorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its discretion, to establish on your behalf a brokerage account in youl name with the Firm or book-entry account with our stock administrator and/or transfer agent and deliver to that account any vested shares derived from the award.

With respect to any applicable vesting dale, JPUoigan Chase may impose for any reason, as of such vesting date lor such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to. restricting the sate, transfer, pledge, assignment or encumbrance of such shares of Common Stock. By accepting (his awaid. you acknowledge that during such specihed period should there be a determination thai the cancellation or recovery provisions of this Award apply, tlien you agree that any shares subject to such restrictions (notwithstanding the limitation sei forth in (he Right to Sei Off section above) may be cancelled in whole or part (See sections captioned " Protect ion-Based Vesting." 'Bonus Recoupment," "Recapture Provisions." "Termination of Employment" and "Remedies', as well as the subsection captioned '-Amendment' permuting suspension of vesting)

Binding Agreement The Award Agreement will be binding upon any successor in interest to JPUorgan Chase, by merger or otherwise.

Not a Contract of Employment Not lung contained in the Award Agreement consntiitesacuntract ol employment or continued employment Employment is "at-will" and may be terminated by cither you or jpuorgan Chase fur any reason at any time. Hi is award does not confer any right or entitlement to. nor does the award impose any obligation on the Firm to provide, the same 01 any similar award in the luture and its value is noi compensation for purposes of determining severance.

Section 409A Compliance- To thcexieni lhat Section 409A ol the Code is applicable to this award, distributions of shares and cash hereunder are intended to comply with Section 409Acrl (he Code, and the Award Agreement, including these terms and conditions, shall be inierpreied in a manner consistent with such intent

Not withstanding any thing herein to tlie contrary, if you 01 are subicttlo taxation under (lie Code, (n) area specified employee as delined m the JPUorgan Chase 2005 Deferred Compensation Plan and (m) have incurred a separation from service (as defined in that Plan with the exception ol death) and il any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable (under the terms of this award) within six momhs following, and as a result ol your separation from service, then (hose shaies will be delivered during die fiisi calendar month afiei tlie eipirationot six lull months from dale of your separation irom service Further, if your award is not subiect lo a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing (he vested portion of (he award

Change in Outstanding Shares in (he event of any change in the outstanding shares of Common Slock by reason ot any stock dividend or split, recaon ah/at ion, issuance ot a new class of common slock, merger, consolidation, spin-of'. com In 11 a non or exchange ol shares or othei similar corporate change, or any distributions to stockholders of Common Stock other Chan regular cash dividends. Ihe Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other secu-iiws issued or reserved for issuance pursuant to the Plan and to any PSUs outstanding under this awaid for such corporate events.

Other Equitable Adjustments. I»oCommi:ier mat makeadjusimensiiirun duwni io t-'h- award as.l nccms to Hy ecu-iaMc to maniiam the iruendi-U rcnnsinnc-, ot tne .iw.iid m light of mangL-d o.tiinsta'ices. wim.h mav ■■nclude unusu.i [1] -.n nor--MMjinng i-Vfnti Jfectins me Finn ior the Per frmiiance (onm.nuesj or us financial siaiemen:s in imp caw res.rii:i(i"om changes m accounting methods nr.icoces or policies changes in caoual structure hy reason oi legal or regulan»y refinements and sucn other changed circumstances as the Committee may deem appropriate

Interpret a I ion/Ad ministration The Commuter has sole and complete authority to interpret and administer tnis Aw.ud Agreement, .nciudmg. without limitation trie nowc' to (il intcmret the Plan and the teims o! this Award Agreement (1.1 determine the reason lor termination oi employment, (m) determine application ol the post-c-niiloynient obligations and cancellation and recovery provision',, (iv> decide all claims arcing wil ti respect to tins award, and I v) ticleg.re such authority as it deems appropriate Any determination contemplated hereunder by trie Committee, tne firm the Director ol Human Resources or their respective delegates or nominees shall be binding on all parties

Notwithstanding anything herein to the contrary, the determinations oi the Director of Human Resources, (he rum the Committee and their respective delegates and nominees under the Clan and the Awaid Agreements are noi required to he unuorm By way of clarification thcCommittee, the Firm, the Director c>l Human Resource" and their respetnve delegates ami nomineesshi'l'ibeentitledtomakenon-uniforniand selec t ive del er mi nation sand modifications under Award Agreements and the Plan

Amendment The Committee or us nominee reserves (he right to amend this Award Agreement in any manner, at any time and (o) any reason, provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent

Amendment. The Committee or us nominee reserves (he right to amend this Award Agreement in any manner, al any time and lor any reason, provided, however, that no such amendment shall materially adversely affect your rights under this Awaid Agrccment without your consent eicept to the extent that the Commit lee or us delegate considers advisable to lx) comply with applicable laws or changes in or mierpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose (he restrictions described above under 'no Ownership Rights." in either case, to me extern permitted by Section 409A oi the Code il n is applicable 10 you Tins Award Agreement may not he amended except in writing signed by the Director of Human Resources of IPuorgan Chase

Severability rf any nor non of the Award Agreement is determined by the f irm to be unenforceable in arty juffsdrciion any court or arbitrator ol competent junsditlion or the Director of Human Resources may reform the relevant provisions (e %.. as lo length ol service, time, geographical area oi scope) toihecxlcnt the Firm (or court/arbitrator) considers necessary to iiiaxe the provision enforceable under applicable law

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity- upon reu-ipl of satisfactory cvidcncethai applicable United Stales lederal. state, local, foreign or supranational ethics or conflict ofmierest laws or regulations require you to divest your interest m JPUorgan Chase PSUs, the Firm may accelerate the diynbution ol all or pan of your outstanding award, including Reinvested Dividend Equivalent Shareunits.eflectiveonorbeforeihe required divestiture dale and waive the Holding Requirement, provided that no accelerated distribution shall otcur if the Firm determines lhai such acceleration will violate Section 409A of ihe Code

I! you have vol untarilyieim mated your employment and havesattsf ted the requirements of the seciion captioned "Government Oft ice Requirements', acceleration shall apply (to extent required) to the percentage ot your outstanding award that would continue to vest under that section, in lhe case of a terminal Kin of employment where the award is outstanding as a result of the subsections entitled "Job Elimination" or "Full Career Eligibility." then acceleration shall apply, to the exlcnt required lo the full outstanding award Subject to the two foregoing sections, the number of shares ol Common Stock to he received on acceleration shall be determined using the methodology set forth under the section captioned "Pcil5 *

To the extent you have vested shares under (his award subject in the Holding Requirement and become subject to divestiture requirement as forth herein, the Firm may waive the holding period to the extent required.

Notwithstanding an accelerated distribution or waiver ol the Holding Requirement pursuant to the foregoing, you will remain subiect to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of lhe vesting date, including, but not limited 10. repayment obligations set forth in the section captioned "Remedies" and the employment restrictions m rhe sections captioned "Protection-Based vesting" and "Government Office Requirements" and (he subsection "Full Career Eligibility"

use of Peisonaf Data iiv .'iru'iit ne. ;i-s award i<>v nave .icMinwl-dfj-.-cl t:ia; rip him ri.u 11 ror ess vour :ieiso.-.3 ⁝ ri.r.a including M"·iit'v;- iieison.ii Mat.i) I'n iwlOWi inc.iu.-iu <http://inc.iu.-iu>if but not i:i:iiiefl lo i■ ■ di'ie'nurii.-.g voir (.iiiiiir'nsriimn (m ;i.j/ioi ■jCUvines inriudi'ii; liui not limited 10 1J> witrmoidi'iij <t:n: leguiatnrv ri'ncirluig wnidi la- and rcgul.il <http://rcgul.il> or v r courting anJ n.U!inolduiE mav inrjurk- :iui is not limned 10 ine united Siaie-. and i:s political si idd visions (■■ noi tne unued Si.nes) voir work country and if. political sunriivisions (including countnc to which vou travel on (i:m easiness) and your country of rr/sidHKP or nationalt.(mi) registration ol shaies bvl establishing bmkerage account on you: benall jno(v)alio(hei lawful pu'poses r?:aien to vour employment and (ms award and mat tne Firm may provide sucn data to mrd rw⁝ iv vendors wiin whom it lias cw'i .-acted lo nrovide sii;ii services and/ni other bodies, including regulators, supervisor bodies law en'iircfiwiii and Ptnergnvcnrieiit agencies Vou are acknowledging and agreeing that your persona [1] rtai<!wi [l] be transfer red to and processed in countries and locations mat do not have the same data privacy laws ano statutory nmiec non loi iiwsonal oaia as vour wmk uiuuuy country o' icsitlence or couniiy nl nationality il wwi personal data ts sttbieci to data privacy laws or statutory nrotetnnu for personal data and they so provide 'or termination ol me loreguing authorisation, you may lenmnaie ihe authorization at any time except with respect to tat and regulaiory reporting and sublet i always 10 the Firms legal and icguiaio'y obligations In ihe event you terminate this authorization, your award will be cancelled

Goveinuiglaw Tins awanl snail be BOve<nedhy and consiiued in accordance witn tne lawsuit he State ot New York, wnhotil ■'pgard to conflict ol law principles

Choice of Forum By accepting this award under the Plan, you agree (and have agreed) thai to (lie evtent not otherwise subieci to arbitration under an arbitration agreement between you and tne Firm, any dispute arising directly or indirectly in connection with this awaid or the Plan shall be submitted to arbit ration m accordance with the rules of tne American Arbm at ion Association i' so elected bv the Tirm in us sole discretion in the event such a dispute is not subject to arbitration far any reason you agree so accept the exclusive lunsdiciion and venue of lhe Unued States Oistriri Court tor the Southern Oninci ci-New vo'k with respect to any ludiciaioroceeduiginconnectior. with this award or the l'ian You waive, to Mm tulles; exte-H permitted by law. any objection to personal lunsdiCliun or to the laying ol venue of such dispute and lurther agree not to commence any .icnon arising out of or relating to this award oi the Plan in any othei forum

waiver of Jury inaf/CTass Claims. By accepting this award, you agree, with respect to any claim brougm in connection with you: employment with the Firm in any forum (i) to waive ihe right to a jury (rial and 00 thai any judicial proceeding or aiburahon claim will be- brought on an individual basis, and you hereby waive any nghl (o submit, initiate. C" participate m a representative capacity or as n plaintiff, claimant or member in a class anion, collective action, or oiher representative or lomi action

Litigation.- By accepting any award under the Plan, you agree (and have agreed) that many act ion or proceeding bv the rum (oilier than a denvahw suit in the right ol the Firm) to enforce the terms and conditions of this Award Agreement or any oiher Awa'ri Affrremcm where the Firm u the prevailing parly l lie Firm shall be entiUedirj recover lrom you us reasonable attorney fees and expenses incurred in such action or proceeding, in addition, you agree lhat you arc not entitled to. and agree not loseek, advancement of attorney lees and indemnification under the Firm's By-Laws in (he event of such a suit by De Fum

Nontransferability: Neither (his award or any other outstanding awards of restricted stock units or ol perlormance based share unus nor your interests or rights in any Such awards, shall be assigned, pledged, tiansferred, hypothecated or subject (o any hen An award may be transferred Following your death by will, tne laws of descent cm bv a beneficiary designation on file with the Firm

Notwithstanding anything herein to the contrary, lhe Firm's and the Committee's determinations under the Plan and che Award Agreements are not required to oc uniform By way of Clarification, the Committee and the Finn shall be entitled to make nonuniform and selective determinations and modifications under Award Agreements and the Plan

Amendment: The Committee or its delegate reserves the nghl to amend this Award Agreement in any manner, al any time and lor any reason, provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except lo the extent that the Commmee or its delegate considers advisable io (x) comply with applicable laws Or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standaids and (y) make a Change in a scheduled vesting date or impose (he restrictions described a hove under "no Ownership Rights." in either case to the extent permitted by Section 409& ol the Code. This Award Agreement may not be amended except in writing signed by the Director Human Resources of JPUorgan Chase

Severability- Il any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator ol competent jurisdiction or (he Director Human Resources may reform Hie relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent lhe Firm (or court/arbitrator) considers necessaiy to make the provision enforceable under applicable law

Definitions

"Annual PSUs" means the number of PSUs determined by multiplying the Target Award Number (after giving effect to any cancellation (hereof, in whole or in part) by the Target Award Percentage corresponding to the Firm's Perlormance Ranking for each applicable performance year (both percentage and ranking, as set forth in the loot note to the Performance Table), provided that ir the Firm Reported ROTCE for any completed calendar year in ihe Performance Period either equals or exceeds 14«* or is less than b%. one hundred fifty percent or zero, respectively as the case may be. shall be substituted For that year's Target Award Percentage in calculating the number of Annual PSUS for that year For avoidance of doubt, any cancellation ol this award (in whole or in part) during the Performance Period will reduce the Target Award Number

"Average Tangible Common Equity" means annual average common stockholders' equity less annual average goodwill and annual average Identifiable intangible assets. Annua! averages of the components of Average Tangible Common Fquity will be calculated using quarterly balances as reported in publicly available financial disclosures, in the event that quarterly balances are not available, annual year end balances will be used This calculation is used solely for purposes of the Performance Ranking.

"Calculation Agent" means a third party entity not owned or controlled by the Tirm, such as an accounting or consulting lirm, retained lrom time to tune by the Director ot Human Resources or his/her delegate.

"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules ol self-regulatory bodies) related to the Firm's business, (n) indictment or conviction of a felony, (ui) commission otatrauduient act. (iv) violation ot the JPUorgan Code of Conduct or other Firm policies or misconduct relaled to your duties to (he Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or fob function or failure to follow reasonable directives of your manager, or (vi) any act or failure 10 act that is injurious to the Interests of the Tirm or its relationship with a customer, client or an employee.

"Financial Services Company" means a business enterprise thai employs you in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) and engages m

commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services.

insurance, including but not limited to. guaranteeing against loss. harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker foʳ purpose of the foi going, financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other simitar activities), brokerage services, investmenl management services, asset management services, and hedge hinds, issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments, advising on, or investing in, private equity or real estate, or

any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.

"Firmwide Financial Threshold" meansa cumulative return on tangible common equity lor calendar years 2017,2018 and 2019 of not less than 15H Cumulative return on tangible common equity means 0) the sum ol the Firm's repot led net iiKome lor all three calendar years, divided by fii) reported year-end tangible equity averaged over the thiee years "Firm Reported ROTCE" means the Firm's percentage return on tangible common equity tor each yea' us the Peifoi mance Period (as calculated lot use in its publicly available year-end linanciai disclosures without taking into account any rounding conventions used for financial reporting purposes)

■Government Office" means (0 a full-time position in an elected or appointed office in local, state, or lederal government (including equivalent positions outside the U.S or in a supranational organization), not reasonably anticipated lo be a lull-career position. o> tu) conducting a bona Tide full'time campaign lor such an elective public office after formally tiling for candidacy, where it is customary and reasonably necessary to campaign lutl-tnne tor the o?fice

"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate investment Bank) All Corporate Functions (including the functions ot the Chief investment Office) are considered a single Line o! Business.

"Line of Business Financial Threshold" means the linanciai threshold set forth below- for the lollowmg tines of Business based on the Firm's management reporting system

Asset I weoltti Uanagcmcnt Annual negative pre-provision net income [1]

Card. Commerce Solutions. Auto Finance and Student Annual negative pre-tax, pre-loan loss reserve income [1]

Commeicial Banking Annual negative pre-provision net income including loan charge-offs

Corporate investment Bank Annual negative pre-provision net income for CIB overall and/or annual negative allocated product revenues (excluding DVA] for

* Uacro products.
    - V Currency and Emerging Uarkets
    - Rates
    - Commodities
* Spread Products
    - Credit
    - SPG
    - Public Finance
* Equities
* investor Scrwr.es <http://Scrwr.es>
* Global Banking

Consumer Banking Business. CWU and Business Banking Annual negative pre-provision net income [1]

Corporate Functions (including Chief Invesimcnl Office) Annual negative pre-provision nel income [1] reported at the Firm level

Uongage Banking Annua! negative pre-tax. pre-loan loss reserve income'

'Pre tax pie-provision income means Revenue leu Expenses
'Pre-tai pre-loan loss reserve irvjonie means Revenue less (Fiperr** plus Net Charie-offs)

"Nol-for-(>rofil Organization" means nn entity exempt from tax under stale law and under Section 501(c)(3) ofthcCode Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing (or pnbhrsfllety, literary or educational purposes, or to foster national or internal lon.ilam.-iieur snorts competition or for the prevention of cruelty to children or animals Not-for-profit Organization shall also mean entities outside the United states exempt from local and national tax laws because they are organized and operated exclusively tor purposes identical to those applicable to Section 501(c)(3) organization. "Performance Companies" mean the following instiiutions which have business activities thai overlap wuh a significant portion of the Firm's revenue mix. Bank of America Corporation,

Barclays PLC. Capital One Financial Corporation, Citigroup Inc.. Credit Suisse Group AG, DeutscheBank AG. Goldman Sachs Group, Inc.. HSBC Holdings PLC. uorgan Stanley. Wells Fargo a company, and UBS Group AG

If. during the Performance Period, one or more Performance Companies shall merge, engage in a spin-off or otherwise experience a material change in its revenue mix or business activities or its exislcnce or us primary businesses shall terminate or cease due to receivership, bankruptcy, sale, or otherwise, then the Commmee may eliminate such institution horn the list of Performance Companies or make such other equitable adjustments, such as adding an acquirer oi a new company to the list of Performance Companies, as it deems appropriate, with any such changes having effeel for purposes of all calculations hereunder on a prospective basis from the date the applicable change is made

"Performance Period" means calendar years 2017. 2018 and 2019

"Perlormance Tahie" ■nc.i.'s mo tatm- m«l in trie tjii nuiior. ol Annua: PSUs :•■!< ii year in th" iyi ionium , Period as ie: forth ocfon

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ll, after ihe calculation ol the Perlormance Ranking, there is a lie. the tie sna'i he disregarded loi purposes ol determining the Targei Award Percentage. For example in the casp of a tie lor ihp fourth raniing Between the Firm and a Performance Company, the f irm shall be treated as having satisfied thai ranking in the case of that same lie among Performance Companies, the louMh and filth rankings will lie deemed to have been satisfied

"Recognized Service" means the period of service as an employee set form in tne Firm's applicable service-related polities.

"Performance Ranking" means the ranking ol the R01CC of the Firm as compared in lhe ranking of Mie R01CF of the Performance Companies as specified m the footnote to the Perlormance table for each year in the Pcrfoi niance Period

"ROTCE" means for the Firm and each of the Perlormance Companies a percental derived bv. loi each year in ihe Performance Period, dividing d) annual earnings from continuing operations less dividends on pteterred stock as set forth in published financial disclosures by (nl the Average Tangible Common Fquity tor [he year If. prior to the end of the vesting period, the Firm or any Performance Company restates its published financial statements for any year In the Performance Period, ROTCE (or that year shall be recalculated for the Firm or Performance Company wilh Ihe Performance Rankinf adjusted, if necessary This calculation 11 used solely for purposes of the Performance Ranking.

"Target Award Number" means the number ol PSUs designated as such in the Award Agreement

Target Award Percentage" means tlie applicable percentage specified in the footnote to the Performance Table fui each yeai in the Performance Penod

Full Career Eligibility

■Qce.erjirii('iii.O'fxt_Ri·<li"!'nipn!S" does noi apply to you il you satisfy ihe subsection captioned " Fu^Caiee_r Fhgjtiility" as ot iw; d.ne thai you voliiiiiiriif terminate vour employment with ihe rum

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Lhgibiiiiv tor continued vesting is conditioned on vour providing tne Firm

ai lean 60 clays advance written notice of your intention to resign to accept or pursue a Government Office (see sen urn captioned -[leiiniiions'l dti-ing which pc:iod you musi perform in a cooperative and professional manner services rmuested by the Fum and not n'ovitle seivu.es <http://seivu.es> 'ur any other employer Trie F inn may elect io sho'ten ilin notice period ,u ine Firm's discieuon Confirmation ■■' a form satisfactory io the Firm, that vesting in this award pursuant to tms p'ovsion would not vio;ate any applicable law. regulation or rule Documentation in a form satisfactory io Ihp Firm thai your resignation is lor the purpose of accepting a Governmeiu Office or becoming ,-. candidate loi a Government Ofdce (See section captioned "Definitions ")

Portion ot Vour Award Subject to Continued vesting

Subject in ihe conditions nelow. the percentage of tms award thai will continue to vest in accordance with this award's original schedule wi:i tie based on vour years ol continuous service completed wuh the Firm immediately preceding your lermmation dale, as tallows

50% i: you have at least .1 but less than 4 ycais of continuous service.
75% if you nave at least * hut less than 5 years of continuous service, or
1 00% if you have 5 or more yc<us of roniiniirius service

Tne portion of (his award subject to continued vesting above is referred to as the "CV Award" and the portion not subfect to continued vesting will lie cancelled as of the date yom empioymeni terminates

Conditions lor Continued Vesting of Award-

toii must remain m a non-elective Government Office For two or more years after tour employment tiv terminates ta uv alif.mte io receive ihe Cv Award, provided thai if your non-elective Government Office is lor a period less than two years, you will be eligible io teceive the CV Award if it has a vesting date during your period ot Government Service, or
in ihe case of resignation irom the Firm to campaign ior an elective Government Office, you' name musl lie on the primary m final public ballot
lor the election (il you aie not eletted. see below for empioymeni restrictions)

Tor avoidance ol douhi.thp pcrtormarxe criteria and protection based vesting sei forth in these terms and conditions continue io apply to a CV Award

Satisfaction of Conditions

I! vour service in a Government Office ends two ycais or more alter your employment with Ihe Firm terminates, or in the case of resignaiion from ihe Firm to campaign 'or a Government O'fkr, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards tnen outstanding and any such awards thai would have then been outstanding but for an accelerated distribution of shares (as described m tne subscciion captioned "-Accelerated Disiribution for Ethics or Conflict Reasons Resulting Front Employment by a Government Entity") will he subject tor the remainder of the applicable vesting period to ihe same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as it you had lesigned from the Firm having met the requirements for Full Career Eligibility

Failure to Satisfy Conditions

ll you do not satisfy the above "Conditions for Continued Vesting of Awards," any outstanding PSUs under ihe CV Award will be cancelled you also will be required to repay the Fair Uarkci Value of the number of shares (before tax and other withholdings) ol Common Stock distributed to vou that would have been outstanding as PSUs on the daie you 'ailed to satisfy the "Conditions lor Continued vesting ol Award'but for their accelerated distribution (as described in subsection captioned. "Accelerated Disinbutton lor Ethics or Conflict Reasons Resulting From Employment by a Government Entity") Fair Market value tor this purpose will be determined as the date lhat the shares were distributed

Form and Purpose of Award

Exhibit 10.23 (U.S.)

JPMORGAN CHASE I CO. LONG-TERM INCENTIVE PLAN TERMS AND CONDITIONS OF JANUARY 17,2017 RESTRICTED STOCK UNIT AWARD OPERATING COMMITTEE (Protection-Based vesting Provisions)

These terms and conditions are made part of the Award Agreement dated as of January 17, 2017 ("Gram Djip") awarding restricted stock units pursuant to the terms of Ihe JPUorgan Chase & Co. Long-Term incentive Plan ("Plan") To the extent the terms of the Award Agreement (all references tn which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other arjreement. whether written or oral, that may have been entered mm by the Firm and you relating to this award.

This awanj was granted on the Grant Date subject to (he Award Agreement Unless you decline by the deadline and In the manner specified in the Award Agreement, you wilt have agreed to tn bound by these terms and conditions, effective as of the Grant Date, if you decline the award, it will be cancelled as of the Grant Date.

Capitalized icrms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan

JPMorgan Chase* Co. will be referred to throughout the Award Agreement as "JPUorgan Chase,* and together with its subsidiaries as (he "Firm."

Each restricted stock unit represents a non-transferable right to receive one share of Common stock as ot the applicable vesnng date as set forth in your Award Agreement

The purpose ol this award is to motivate your future performance for services to be provided during the vesting period anc to align your interests with those of the Firm and us shareholders.

if dividends are paid on Common stock while restricted stock units under this award are outstanding, you will be paid an amount equal to the dividend paid on one share of Common Stock, multiplied by the number ol restricted stock units outstanding under this award as of Ihe dividend record date

This award is intended and expected to vest on the vesting date(s), provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "-Job Elimination." "-Full Career Eligibility.' "-Government Office" or "--Disability " However, vesting and the number ol restncled stock units in which you vest are subiect to these termsand conditions (including, but not limited to. sections captioned 'Recapture Pinvisipns." "Remedies" and the loi lowing protect ion-based vesting provision)

Up to a total of fifty percent ol your award that would otherwise be distributable to you during the vesting period ('At Risk restricted stock units") may be cancelled if the Chief Executive officer of JPMorgan Chase ("CEO") determines in his or her sole discretion thai cancellation of all or portion of the ai Risk restricted stock units rs appropriate in light of any one or a combination oi the following (actors.

Vour performance in relation to the priorities for your position, or the Finn's perlormance in relation to the priorities for which ynu share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained penud ot time Among the factors the CEO may consider m assessing performance arc net income, total net revenue, return on equity, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.

Foi any calendar year ending during (he vesting period. JPMorgan Chase's annual prc-tai pre-provision income at the Firm level is negative

Awards granted to participants in a Line oF Business tor which you exercise, or during the vesting penod exercised, duect oi indirect responsibility, were in whole oi in part cancelled because the Line ol Business did not meet its annual Line ol Business Financial Threshold The Firm does not meet the Firmwide Financial Threshold

In the event that youi emDioymcnt terminates due to "Job Elimination." "Full Career Eligibility." (k«rnmcn(Omce" or "Disability" thereby entitling you lo continued vesting in your award (or potentially acceleration due (o satisfaction of ihe Government Office Requirements), the cancellation circumstances described above will continue to apply to your At Risk restricted stock units pursuant lo lite section captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment bv a Government Entity "

Any determination above with respect to protect ion-based vesting provisions is subject to ratification by the Compensation and uanagement Development Committee of the Board ot Directors ol JPMorgan Chase ('Committee') in the case of an award to the CCO, all such determinations shall be made by the Committee.

vest Penod Amendment" The penod from the Grant Date io the last vesting date is (he "vesting period." (See subseciions captioned "--

pursuant to which the Fum may extend the vesting period and *-Ho Ownership Rights" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following a vesting date.)

Holding As of each vesting date, you shall be entitled to a distribution equal to the Fair Market value ot the number ol restricted stock

Requirement units vesting un such date, less ihe number being withheld lo satisfy tax withholding obligations Vou agree Ihat the distribution made toyou will be neld in an account in your name with restrictions pi eventing you from translcrring, assigning, selling, pledging or otherwise encumbering such distribution (ur a six month period commencing with the vesting date. Such restrictions shall lapse in event of your death

Bonus incorisideialionof thegrani of this award, you agree thai you are subject lo the. JPUorgan Chase Bonus Recoupmenl Policy (or

Recoupment successor policy) as in clleci Irom time to lime as it applies hoth to the cash incentive compensation awarded lo you for

performance year 2016 and to this award You can access this policy as currently in effect through the following link.

hii»/Mww.pmorEa ntha.se <http://ntha.se> jQmA:o.'ooraie/About-)PUacorroraie-erAernance-oruKioles.him>reccHinrrient

f-o' ihe avoidance of doubl. nothing ir tnese terms and conditions in any way h'uls the rights of the Firm under the JPUorgan Chase Bonus Recoupment Policy (or successor policy)

UK Clawback in consideration ot grant of Ihis award, and without preiudice lo any other provision of this Awaid Agreement, you agree that

Policy for you are subject to the JPUorgan Chase Clawback Policy for identified Staff or successor policy as m effect Irom time to time as

Identified Staff car. arj.;jPS both to the cash incentive compensation awarded to you tor performance year 2016 and to this award You

access this policy sn currently mclfect in My Rewinds through Ihe following link hitpsZ/myrewardsjamcliase net/' myrewards

Rrcapture Provision*

Conducl, Risk-Related and Other Recapture Provisions)

Noiwm-siandingany letmsoi m-s Aw.ud Afcreemen; io me contrary jPuoiEaiiCnasi-M'Sijives tne ngin i cancel un in I Ot)1* ol vow iiulsMridnirj resinned stock unus under Hns award and io ihe p'teni set ':n t: (o'wfti-iv Irom rfw uu in m unoum equal wtnc-.w Ud-ht v.vuv iOc'-crm-nfl >k ot mo .i.iX.i.'hv v.-; .iiiiiiln*' ot snares o' Common Sltn> nreviousiy distributed (including snares wuiinelil It*.- i,i> ;iurriovsi i Fun m its so:? discretion cleierm.nesin.ii

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you engaged m conducl detrimental to the Fin o: us tiusmess activities, or

ihis award was based on maienally inaccurate performance metrics. wnntMer or not you were responsible mr Uif-imccuracy or

;fifi award was tuned cm a maierial misrepresent aiior try yoii or

you impmneily or witli gross negligence failed to identity raise or assess, m a nmely m.inne- and as 'easonawy eiiiected. risks and/c concerns with respect lo risks material (o (lie Tumor us business activities o' your employment was termmaied (or Cause (see settlor capnnni.

-rt "Oefimiions' below) or in die case (>' » determination alter Ihe icrmuiaiinnoi your employment, tlwtyoir employmont could have beer terminated fo> Cause

Sec section captioned 'Remedies' tor additional information

fPMorcan Chase's ngfir to cancel aod/tv recover the vaiue of this award (or any rasrt bonus) under the JPUorgan Chase Bonus Recoupment Policy and the other provisions of this award lelale lo Ihe "organizational goals" of the Tirm ,>s thai lemi is defined by regulations issued under Section 409* oi (he Internal Revenue Code ("Code")

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bet- a-so definition o: Gu*<

- Disability [iisatuhtY-

vcni tnat

vour employment will; Ihe Him terminates because bl vou aie unable lo return in work while you are ci-ceivrng bem.'lus uwlei ihu iPUur^in Chase Long Term Disability P:an. or loi noi'. II S employee:., nuclei ihe equivalent IPuorgan cr.ase sponsored loca rnuniry o'l" (m either case "LID Pl.m") or (i.) i! vot, are not covered hy a -JD Plan, you .up uiuti-e lo 'Ciurn to wo:k due to a long-term disability that would rimlify >nr oenefus under (he anpur.ahle LTD Plan, as determined riy dp Firm or a thud-party designated by the Nr:it tiruvided thai ynu (j) reouest in wilting continued vesiingdue to such d-saniluy within 30 days ol the date your employment terminates and (y) rxovioe any iequesied supporting documentation and (;} receive the Firm's wiilten cunseni to Such treatment, and

you satisfy tlie Relcasc/Certilicaiion Requirements set fortn below

Except aseiplicitly set lorih below under the subsections captioned "-Job Elimination." "--Full Career Eligibility""-Government Office" or "--Disability" below or under the section captioned "Death." any restricted Siotk units outstanding under tins awaid wilt be cancelled effective on the dale youi employment with the Fum lermuuies fo-' any reason.

Subject to tiiese terms and conditions (including, but not limited to, sections cannoned "Protect ion-Cased vesiing," "Bonus. Recoupment.' "Rccantuie Piovisions." "YtAir Obligations' and "Remedies"), you will be eligible toconiinue "to vest (on the original vesting schedule) with respect to your award in accordance with its terms and conditions following the termination ol your employment il one ol the following circumstances applies to you.

To qualify loi continued vesting after termination of your employment under any o' the loiefioing circumstances

vou must timely execute and deliver a release of claims in favoi of the Firm, having such form and terms as tne Firm shall specify

with respect to "Full Caieer eligibility* prior to the terminal ion o! your employment you musl confirm with managemen! that you meet the eligibility cruena (including providing at least 90 days advance written notification), advise thai you are seeking lobe treated as an individual eligible for "Full Career Eligiiiilu v.* and receive wr men consent to such continued vesting.

> Job Jab Lhminatiqn Elimination

In the event that the Director of Human Resources or nominee in his or her sole disc lehnn determines that the Firm terminated your employment because your job was eliminated jjicj

after you arc notified that your job will be eliminated, you provided such services as requested bv the I irm in a cooperative and professional manner, jnjj

you satisfied the Rcloase/t>rtifnation Requirements set forth below

> Full Full career Eligibility Career

Eligibility m the event (hat the Director ol Human Resources or nominee in his or her sole discretion determines dial

you voluntarily termmaied your employment with the Firm, had completed al least live years of continuous service wilh the Firm immediately preceding your termination date, and i

your Recognized Scrvice(as defined be1ow)onyourdate of termination equaled orcxceededIS years, or you: combined Recognized Service with the Firm and external professional experience (as attested by you to the Firm) equaled oi exceeded 30 years, and

you provided at least 90 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which nonce period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other rmployrr. jnd

continued vesting shall be appropriate, which determination shall be made pno< to your termination and will be based on your performance and conduct (before and after providing notice), anrj._

lor 36 months from the date of grant of this award you do not either perform services in any capacity (including seit-employment) for a Financial Services Company (as defined below) or work in your profession (whether or not lor a Financial Services Company); provided that you may work lor a government, education or Not-for-Prof it Organization (as defined below), and

you satisfy the Release/Certification Requirements set forth below

alter receipt of such advance written notice, the Firm may chouse to have you continue to provide services during sucr. 90-day period as a condition to continued vesting or shorten the length of (he 90-day period at the Firm's discrel ion, but to a date no earlier than the date you would otherwise meet the service requirement.

Additional advance notice requirements may apply foremptoyees sub/ecf to notice nvnod policies- (See "Notice Peilod" betow)

rearm documentation described above a"rJ receive w.-uten roj?sem

wilh rczpni lo'OisaoiiliY.' YOo mvsi satisfy Ihe nt 10 such continued vesting.

w:tfi respect to "Full Careei E'lg-bility." it >s your responsihihiv in take ihe aopronriatesieostoceriilytotheFumpnor to each vesiirif, date while (he employment restrictions are outstanding on (he authorized form of trie Firm tnai you have complied witn the employment restrictions applicable to you (as described herein) Irom your date of termination ol employmeni tmougri the applicable vesting date, and i- aff cases, complied with all other terms of the Award Agreement (See section captioned 'Vour Obligations" >

Death it you die while you are eligible to vesi m restricted stork units under this award, the restricted stock umls will immediately vest and will be distributed in shares ol Common stock (after applicable tax withholding) loyotir designated benefinary on file with the I urn i Stock Admimstianon Department, or il no beneficiary has been designaicd ur survives you. then to your estate Any shares will tie distributed no later than the end of the calendar year immediately following the calendar year which contains your nate of death, however, our administrative practice is to register such shares in the name of your beneficiary or estate within 60 days of (he Firm's receipt o(any required documentation

Vour Obligations in consideration of (tie grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non Solicitation pi Employees and Customers." "-confidential information.' "-.-Nojv Disparagement." "-Cooperation." '-Compliance with Award As:icement." and "-Notice Period."

- > Hon- during your employment by the Firm and for the longei o((bed) one year penod fdtowin"" the teiwiTJliOnolyourempicIymenf Solicitation or. (m if your award is noi cancelled as ol your termination date, the three year period Irom Grant Date, you will not directly or of indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Dnectorot Human Employees Resources. d) solicit, induce or encourage any ol the Firm's then current employees to leave the Firm or to apply for employmeni and cisewhere. (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated. Customers unless the individual's employment terminated because his or her job was eliminated, or (he individual's employment with the Firm has been terminated tor more Ihan six months, (ui) to ihe fullest extent enforceable under applicable law, solicit or induce or attempt to induce lo leave the Firm, or divert or attempt to divert from doing business with the Fum. any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of youi employment wilh the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or oilier persons or endues This docs not apply to publicly known instil utional customers that you service after your employment with tne Firm without the use of the Firm's confidential or proprietary information

These restrictions do not apply lo authorized actions you take in the normal course of your employment with tlie Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm s policies

■ > confidential You will not, other during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any information confidential information related to the Finn's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or lite employment ol others, by the Firm, in the case of either (i) or (u), except as explicitly permitted by the JPUorgan Chase Code ol Conduct and applicable policies or law or legal process In addition, following your termination of employmeni, you will not. without pi ior written authorization, access the Firm's private and internal mlormation through telephonic, intranet ur internet means "Confidential information" shall have the same meaning tor the Award Agreement as it has in the JPMorgan Chase Code of Conduct.

Nothing in this award precludes you from reporting to the Firm's management or directors the government, a regulator, i sell regulatory agency, your attorneys or a court, conduct you believe to be in violation of the law or concerns of any known or suspected Code ol Conduci violation It is also not intended to prevent you from responding truthfully to questions or requests from (he government, a regulator or in a court of taw

• > Non- You will not. either during your employment with the Firm or thereafter, make or encourage others to make any public statement DisoanEernerit or release any information in verbal, written, electronic or any other form, that is intended to. or reasonably could be foreseen to. disparage, embarrass or criticize the Firm or its emptcr/ees, officers, directors or shareholders as a group. This shall not preclude you Irom reporting to the Firm's nuriagement or directors or to the government or a regulator conducl you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests lor information to the government a regulator or In a court of law in connection with a legal or regulatory imeititatton or proceeding.

*Cooperation You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect (0 any matter (including any audit, tax pioceeding, liligation, investigation or governmental proceeding) with respect to winch you may have knowledge or information, subject to reimbursement Tor actual, appropriate and reasonable out-of-pockel expenses incurred by you.

■ y Compliance You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and with Award You authorize the Tirm to disclose the terms of the Award Agreement toany third party who migtil be affected thereby, including Agreement *° ur Prospective employer.

• • > Notice if you are subject to a notice period or become subject to a notice period after the Gram Date, whether by contract or by policy, Period that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued tmploymcnt, you will provide the Firm wilh the necessary advance written nonce that applies to you. as specified by such contract or policy.

After receipt of your notice, ihe Firm may choose lo have you continue to provide services during the applicable Notice Period or mav place you on a paid leave for all or part ot the applicable Notice Period During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services m a cooperative and professional manner and not pcrlorm any services for any other employer and shall receive your base salary and certain benefits until youi employment terminates You and the Firm may mutually agree to waive or modify the length of Ihe Notice Period

Regardless of whcttiec a Notrce Period applies to you. you must comply with the 90-day advance notice period described under ihe subsection captioned "--Full Career EliPbijuv" in ihe event you wish to terminate employment undei that same subsection

v cancellation in addition to the cancellation provision: described under the sections captioned "Protection-Based vesting." "Bo^us ENoupmenJ.* "Recaniure Provisions' and "Termination of Employment." your outstanding restricted stock units under this award may be cancelled if the Firm in Us sole discretion determines that

you have lailed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or

you have failed to return the required forms specified under the section caphewrj "ffclejS£l£enil'C'lllP n" "y »«' specified deadline., or

you have violated any of the provisions as set forth above in the section captioned 'Your Obligations" To the exteni provided under the subsection captioned "-Amendment" below. JPMorgan Chase reserves ihe i ijzht to suspend vesting of this award and/or distribution of shares under this a ward, including, without limitation, during any period Iha(JPUorgan Chose is evaluating whether this award rs subject to cancellation and/or recovery and/or whether the conditions lor distributions ol shares under this award are satisfied JPUorgan Chase is not tesponsibte for any price fluctuations during any penod of suspension and. if applicable, suspended units will be reinstated consistent with Plan administration procedures See also "subsection captioned *-No Ownership RieJus"

* V Recovery in addition, you may be rrauiml to payth* Firm up to an amount equal to the Fair uarket Value (determined as of the applicable vesting dale) of the gross number of shares of Common Stock previously distributed under this award as follows.

Payment may be requited with respect lo any shares of Common Stock distributed within the three year period prior to a not ice-of-recovery under this section, if the Firm in lis sole discretion determines that.

you commuted a fraudulent act. or engaged in knowing and willful misconduct related to your employment, you violated any of the provisions as set lorth above in the section captioned "Your Obligations." or you violated the employment restrictions set forth in (he subsection *-rull Career EluabilitY* following the termination of your employment tn addition, payment may be required witfi rcspeci fo any shares drstributed wrthin the one year period prior fo note e-of-recovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions m the subsection captioned "Recapture Provisions"

Not ice-of-recovery under this subsection is a written (including electronic) nonce from Ihe Firm to you either requiring payment under this subsection or stating that JPUorgan Chase is evaluating requiring payment under this subsection without limiting the foregoing, notice of-recovery will be deemed provided it the Firm makes a good faith attempt to provide written (including eii^inMit)rjoticeal>t«r tokneiwnadrJressmai^^ Frxitieavt^ricen/rJoubt. anolice-of-recovery thai the Finn is evaluating requiring payment under this section Shall preserve JPUorgan Chase's rights lo require payment asset forth above mall respects and the Firm shall be under no obligation to complete its evaluation other than as the Fu m may detenruno in its sole discretion

For purposes ol this section, shares distributer! under this award include shares withheld for tax purposes. However, it is the Tu m's intention that you only be required to pay the amounts under this section with respect to shares that are or may be retained by you followmga determination oi tax liability and Ihat you will not be required topay amounts with resocctioshares representing irrevocable tax withholdings or tax payments previously made (whether hy you or the Firm) mat you will noi be able to recover, recapture or reclaim (including as a tax credit, refund or other benefil) Accordingly, jpuorgau Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments

Payment may lie made in shares of Common Slock or in cash vou agree that any repayment will be a recovery of shares to which you were not entitled under the terms and conditions of your Award Agreement and is noi to be construed in any manner asa penalty You also acknowledge that a violation or attempted violation of (he obligations set forth heiein will cause immediate and ii reparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter oF right to an injunction, from any court ot competent jurisdiction, restraining any violation or further violation of such obligations, sucn right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity

Nothing m the section in any way limits your obligations under "Bonus Recoupment."

Administrative Provisions Withholding Taxes: The Firm ts sole drscrehon. may 0! retain fcoiii each distribution the number of shares of Common Sfotk required lo satisfy applicable tax obligations or (u) implement any otner desirable oi necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shares, dividend equivalents and the award This may include hut is noi limited to (i) a market sale ol a number of such shares on your behalf substantially equal to tne withholding or other lares, (u) to the extent required by law, withhold from cash compensation, an amouni equal to any wi :h holding obligation with respect io the award, shares that vest under [h is a wa id. an d/or dividend equivalents, and (m) retaining shares that vest under this award or dividend equivalents until you pay any taxes associaied with the award, vested shares and/ or the dividend equivalents directly to the competent authorities

Right to Set Off: The f irm may. to the maximum extent pci mitted by applicable law (including Section 409a of the Code lo trie extent u is applicable lo you), retain lor itself funds or the Common Stock resulting horn any vesting of this award to satisfy any obligation or debt that you owe to the Firm'. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestncied securities held in your name and maintained at the Firm pursuant in such account agreement lo satisfy any obligation or debt or obligation owed by you under this award without your consent ThrsrestnctinnontheFirmdoesnol apply to accounts described and authorizedin"r"oC>"nersliipRights"des(;itied below

no Ownership Rights Resinned stock units do not conwy itip ngtiis ol or."eis»ip o< Common mock .md cio noi carry vol mi: rights. No siui<"> ol Common Stuck will be issued to you until alter ihe rmtrineo stuck units have wsied a:*j any ao^hc.ihiv icsinmnits navt lapsed Shaies will

transfer agent and deliver 10 mat account ,iny vest-.'d snares derived from tne award
Il he binding upon any si

with respect 10 any aophcahle vesting date JPMorgan Chase may impose foi any leavw. as of such vesting date ior such ;mvhxl as 1! may speedy in its sole discretion, such restrictions on the Common Stock to he issued to ynu as it may neem .iiiinopnate including, but not limited lo, resinning trie sa'c. trunsler. pledge, assignment 01 encumbrance of such snares oi Common Sun k By accepting this award you acknowledge lhai dunngsuch specified period should theiel»e a determination lhai ihecancellation or recovery provisions ol ihis award apply. Ihen you agree I tint any shares subject to such restrictions (nui mi:-standing Ihe limuation set torth sei forth in the Right to Set OK section above) may be cancelled in whole or pan (Sec sections cannoned "Protect 10f-Based vesting." "Bonus Recoupment." "Recapture Provisions," "Termination, of Employment" ana "Remedies " .;*■ well as the subset lion captioned "-Amendment" permitting suspension of vesting)

ir m interest to jPMo-g.m Chase by mercer 01
Binding Agreement Die Award Agreement m Otherwise

Not a Contract of Employment. Nothing contained in the Award Agieement constitutes a contract of employment or continued empruyment Employment is "at will" and may be terminated by oilier you or JPUorgan c base lor any reason at anytime This award does not confer any nghl or entitlement to. nor does the award impose any obligation on the rum to provide, the'..une ur any similar award in ihe future and its value is not compensation loi purposes ot determining severance

Section 409A Compliance To the extent that Section 409A of the Code ts applicable to this award. distributions ot shares ami cash hereunder ate intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions. Shall be interpreted in a manner consistent with such intent

Notwithstanding anything herein to the contrary, if you (1) are subject 10 taxation undei the Code, (ul arc a specified employee as defined in the IPuorgan Chase 2005 Deferred Compensation Plan and (111) have incurred a separation from service (as defined in lhai pjan with Ihe exception of death) and if any umisAhares under tins award represent deferred coRipensaiion as defined in Section 409A and such shares are distributable (under the terms of this award) within six months following, and as a rcsuli of your separation from service, then those shares will be delivered to during the fir si calendar month alter the expiration nt Six lull months from date ot your separation horn service. Further, if your award is not subject to a substantial risk of forfeiture as delined by regulations issued under Section 4 09 A of the Code, then the remainder of each calendar year immediately following (1) each applicable vesting date set forth in your Award Agrecmcni shall be a payment date foi purposes of distributing the vested portion of the award and In) each date that JPUorgan Chase specifies for payment of dividends decla-ed on Ms Common Slock, shall be the payment date's) for purposes of distributing dividend equivalent payments.

Change in Outstanding Shares: In the event of any change in the outstanding shares ot Common Stock by reason of any stock dividend or split, recapitalization, issuance ol a new class ot common slock, merger, consolidation spin-off. cornVjinanun or exchange of sham or other similar corporate Change, or any distributions to stockholders of Common Stock otner than -enuia' cash dividends the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other secunties issued or reserved for issuance pursuant to Ihe Plan and to any restricted slock units outstanding under this award lor such corporate events.

interpretation/Administration The Committee has sole and complete authority to interpret and administer this Award Agreement, iwluding, without limitation, the (XJwer to (1) interpret the Plan and the terms of this Award Agreement, (ul determine the reason lor termination of employment, (m) determine application of the ^-employment obligations ana cancellation and recovery provisions, (rv) decide all claims arising with respect to this award, and (v) delegate such authority as 11 deems appropriate. Any determination conlcmplated hereunder by the Committee, the Finn, the Director ot Human Resources or then respective defecates or nominees shall be binding on an parties

Notwithstanding anything herein to the contrary, the determinat ions of the Director ol Human Resources, thcFum.theCommittee and their respective delegates and nommeesunderthePianand Ihe Award Agreements are not required lobe unilurm Byway ot clarification, the Committee, the Firm, (he Director of Human Resources and their iespect-ve delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and Ihe Plan

Amendment Hie Committee 01 us nominee "-serves the nghl lo amend irus Awjid XRreeino'ii in .un in.iiin,-: at any unit- and ior any reason woviciwi nnwevei mat no sucn .1 me no mem sh.ifi materially adverse'* affect your ntfus unnvr ims Award ■igioemem »ii:iniit voui ronsen: »«ceiU 10 me extern inn; theCommuiecor its nelegnie cons>ot"s .irKisault to (■ I comply witr. aopiiranif mws or changes in tu interpretation of apnlualile laws regu.aiory rciiiii'euien:), arid accounting nues or s(jnd.u;I\ and/01 (yl .'naxc a cn.inge. in a scheduled vesting date or imao** the- restrictions destnlwd above under "no Ownership n.g:iu." m either case in the extern permuted by Sen ion 409* ol tne Code if u -s applicable vou Th,s Award Agieeuieni may not oe amended ocepi ir wining signed bv iheuuecior ol Human Resources ol il'uorgan Chase

SeverahiJil y If any portion of lly Award Agirement is Oct&mmcr) .ly 11* Turn to tx uneniQtieMe1« - j:>y jurisC-Clion any [ixir I or arbitrator ol t;mi;ietcni jurisdiction or the Director nf Human Resources may reform the relevant piovsmr'S (e g as to length 0'vi vice. lime, geographical areaor scope) toihecxicnt the Firm (or court/arbUMior) considers necessary to mjke ihe provision eriurrcabie under applicable law

Accelerated Distribution for Ethics or Condi a Reasons Resulting Trom Employment by a Government Entity noon receipi ot sat'slanoiy evidence that applicable united Stales federal, state, local foreign or supranational eihics or ronfhci of interest ljws ur regulation require you fo divtrtt vour interest in IPuorgan ttose restricted stock units, the Firm may jcceferafe me distribution ol all or pan ol vour outstanding award eflective on or before the required drvvsiuure date provided thai no act derated distribution shall occur if the Firm determines (hat sorr. acceleration will violaie Section 409 A of the Code

If you have voluntarily terminated your employment and have satisfied the requirement of the section captioned "Governmen; Oltice Requuements.*. acceleration shall apply (10 extent required) to Hie percentage ol youi outstanding award thai would continue to vest under (hat section tn the case of a termination of employment where the award is outstanding as a result ol the subsections eulitled "lob Elimination* or "Full Career Eligibility", then acceleration shall apply, to the c-tenl mimed to ihe full outstanding awaid

Not with standing accelerated distribution pursuant 10 the foregoing, you will remain subject (0 the applicable lerms uf vour Award Agieement as if your award had remained outstanding lor Ihe duration of the original vesting period and shares had been d snbiner! .is scheduled as of each applicable vesting date, including, but not limited to repayment obligations set forth in the section captioned IRjmedies" and the empioymeni restrictions in the sections captioned "Protection Iijsed Vesting" and "Government Office Requirements' and the subsection 'Full Career Eligibility"

use of Personal Data. Bv accepting this award, you have acknowledged lhat the Tirm may process your personal daia (including ^--vjitivt [1] po-soiTal daia) for purposes, including but net limited lo(:) determining your comp-nsat'tji. (11) payo'l activities, including, hut not limned to. t,u withholdmp and regulatory reporting, which tax and regulatory repui ting and withholding m.ty include but is not limned 10. the United Stales, vour word country (including countries to whrh you navel on firm business) and countiy of residence, (m) registration of shares and units, (iv) establishing brokerage accouni on your behalf, and (v) all other lawful purposes related loyour employment and this award and Hut (lie Firm may providesuih daia to third party vendors with whom it res coniraried lo provide with servires and/or Oitiei bodies, including 'eguJjUiri. SupfVHCvy bodies, low enforcement and other government acencies Vou are acknowledging and agreeing that your personal data will be transferred to and processed m. countries and locations that do noi have the same data privacy laws and statutory protection for personal data as your work country, country of residence, or country of nationality if your personal daia is subject 10 data pi ivacy laws ai statutory protection for personal data and they so provide for termination of Ihe foregoing Authorization, you may terminate Ihe authorization at any time except witn respect to tax and regulatory reporting and subiect always to the Firm's legal and regulatory onligaiions In the event you terminate this authorization, your award will be cancelled

Governing Law This award shall be governed by and construed m accordance with (he laws of the State of New York, wiihnul regard to conflict of law principles.

Choice of Torum By accepting this award under the Plan, you agree (and have agreed) (hat (0 the extent noi otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in conned ion witn this award or the Plan shall be submitted to arbitration m accordance with the rules of Ihe American arbitration Association if so elected by the Firm in its sole discretion in the event such i dispute is not subiect to arbif raoon lor any reason, you agree to accept the exclusive jurisdiction and venue ol the united States District Court lor the Souihern Drst: ict of New York with respect to any judicial proceeding m connection with this award or the plan, you waive, to ihe fullest extent permuted bylaw, any objection to personal jurisdiction or to the laying of venue ol such dispute and further agree noi lo commence any action arising out of or relating to this award or the Plan in any other forum

waiver of lury Trial/daw Claims.- By accepting this award, you agree, with respect to any claim brought m connection wuh your employment with the Firm in any forum (1) to wane the right to a jury trial and (11) that any judicial proceeding 01 arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a represent alive capacity or as a plaintiff, claimant or member ma class action, collective acnon. or other representative or joint action.

Litigation: By accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by I tic Firm (other than a derivative suit in the ngtit ot the Firm) to enforce the terms and conditions of (Iks Awaid agreement or arty other Award Agreement where the Firm is the prevailing party, the Firm shall be entitled lo recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney lees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Nontransferability: Neither this award or any other outstanding awards of restricted slock units, nor youi interests or rights m any such awards, stull be assigned, pledged, transferred, hypothecated or subject (0 any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Outstanding Awards; The Administrative provisions set forth above shall apply toany award of resinned slock uniisoutstanding as of the date hereof, and such awards are hereby amended.

'Cause' means a determination by the Firm Chat your employment terminated as a result ol your (1) violation of any law, rule or regulation (including rules of self-regulatory bodies) relaled to the Firm's business (in indictment or conviction of a felony, (ui) commission of a fraudulent act. (iv) violation of the JPUorgan Code ot Conduct or othei Fum policies or mm (induct related to your duties to tne Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or |ob function or failure to follow reasonable directives ol your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee

'Financial Service* Company' means a business enterprise that employs vou in any capacity (such as tn employee, contractor. consultant, advisor, or sell-empirjyed individual, whether paid or unpaid) and engages in:

commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/ or lending and processing services, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,

insurance, including but not limited to. guaranteeing against loss. harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of (he forgoing.

financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in. or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, and hedge lunds,

issuing, trading or selling instrument representing interests in pools ol assets or in derivatives instruments.

advising on. or investing In, private equity or real estate, or

"Firmwide Financial Threshold" means a cumulative return on tangible common equUy (or calendar years ?017 JOifl. and 2019 of not less than 15H Cumulative return on tangible common equity means (0 the sum ol the Firm's reported net income for all three calendar ycais. divided by (11) reported year-end tangible equity averaged over the three years

Asset & Wealth Management	Annual negative pre-provision nel income [1]	
	Annual negative pre-tax. pre-loan loss reserve income'	

Commercial Banking

Commercial Banking

Corporate investment Bank

Annual negative pre-provision net income for CIB overall and/or annual negative allocated product revenues (excluding DVA) tor

- uacro products.
  - Cu ne nc y and Cmcrgi ng Uarket s
  - Rates
  - Commodities
- Spread Products
  - Credit
  - SPG
  - Public Finance
- Equities
- investor services
- Global Banking

Uongage Banking

I Annual negative pre-provision net income'

Annual negative pre-tax, pre-loan loss reserve in

"Hoi-for-Profit organization' means an entity exempt fiom tax under state law and under Seel ion 501(c)(1) of the Code Section 501 (c)(3) only includes entities orgam/ed and operated exclusively for religious, Char/Cable, scientific, testing (or pubdc safety, literary or educational purposes, or to foster national or international amateur sports competition or for (he prevention of cruelty to children or animals. Not-for-profit Organization shall also mean entities outside the United States exempt from loul and national tax laws because they are organized and operated cxdusrvely for religious, charitable, scientific, testing for public safely, literary or educational purposes, or to loster national or international amateur sports competition or tor the piuwntion of cruelty to children o ' animals

"Recognized service" means the penod ot service as an employee set foi ih in the Firm's applicable service-related policies

"Government Office' means (1) a full-time position in an elected or appointed office in local, state, or lederal government (including equivalent positions outside rhe U S. or in a supranational organization), not it'jsonably anticipated to be a full-career position, or (11) conducting a bona lide full-time campaicn for such an elective public office after formally filing lot candidacy, where il is customary and reasonably necessary to campaign full-time lor the office

"Line of Btainesr means a business- unit at the Firm tor one or more business units designated below under the definition 'one of Business Financial Threshold" of the Corporate investment Bank) All Corporate Functions (including the functions of the Chief investment Office) are considered a single Line of Business.

"Line of Business Financial Threshold" means the linanciai threshold set forth below for Ihe lollowmg Lines ol Business based on the Firm's management reporting system:

fnt a Giwti.inii-n (Mire ilehm-d ,i:

Govern men) Office Requirement*

ini.irily resign in a

subsection captioned "--FuN Careei_.FJiE'Nly" .■«. ol iht date th.it <http://th.it> vou

Full Career Eligibility-

'Government Off it^Recjuuc menu" docs not apply 10 vou il vou satisfy l> voluntarily terminate your employment Kith the* Firm

Eligibility:

Ehgibiluy for continued vesting is conditioned on your providing ihe Firm

Al least t>0 days advance written nolire ot your intention to resign in accent or pursue a Government OTdcf (see section captioned "Definitions"). (Inline which period you must perform in .1 cooperative and proiession.il <http://proiession.il> mannei services rcqueiieotiy tne Firm anil noi pinvirii- services lor any other employer The Firm may elect to shorten tins notice oenud al the Finn's discretion

Confirmation, in a lorm satisfaclory to the Firm, that vesting in this award pursuant to Ihis provision would not violate <mv aaoio'jie l.iw regulation or rule

Documeniaiion in a form satisfactory to the Firm thai your resignation ts lor Ihe purpose ol accepting a Government of I ice or tier nming a candidate for a Government Ofiice (See section captioned "Definitions ") Portion of your Awards Subject to Continued vesting:

Subject to me conditions below, the percentage of your outstanding awards that will continue to vest in accordance wuh this award's ongmai schedule will be based on your years of continuous service completed with the Tirm immediately preceding youi termination dale as loiirws

S0% il you have at least 3 out less than 4 years nl continuous service.

7SH if you havcai least 4 but less than 5 years ot continuous service, or

100* if you have 5 Or more years of continuous service

Ihe portion of each award subject to continued vest inc above is referred loas the "CV Award" and the portion not subject to continued vesung will oe cancelled on the date your empioymeni terminates.

Conditions for Continued Vesting or Awards.

You must remain in a non-elective Government Office lor two or mote years a I lei yum employment with the Tirm iermiiia:es tc receive ::• full your CV Awnrd. provided that if your non-elective Government Office is for a period less than two years, you will oe entitled to retain any portion of Ihe CV Award wuh a vesting date during your period of Government Service, or

in the case ot resignation from the tirm to campaign for an elective Government Office, vour name musl he on the primary or final pufitu ballot lor the election (if you are not elected, see below lor employment restrictions.)

Satisfaction of Conditions.

if your service in a Government Office ends two years or more after your employment with tne Firm terminates, or in the case of resignannn from tne Firm to Campaign for a Government Office, your name is on the primary or final public ballot lor the election and you are not elected any CV Awanls then outstanding and any such awards that would have then heen outstanding but loranacccleratuddistribution of snares (as described in the sussed um captioned--Accelerated rMtn^ iubtecilor Vaemmaer

of ihe applicable vesting period to the same terms and conditions ot this Award Agreement, including employment restrictions during the vesting permd as il you had resigned from the Firm having met the requirements for Tull Career Eligibility Failure to Satisfy Conditions.

if you do not saiisly the above "Condiuons for Ccmtinued vesting of Awards,'arry outstanding restricted stock units under each Cv Award will be cancelled you also will be required to repay the Fair Uarkct value ot the number of shares (before (ax and other withholdings) of Common stock dismbuied to you lhat would have been outstanding as restricted stock units on the date you failed to satisfy the "Condition foi Continued vesting ol Awards' uui lor their arc Hera led distribution (35 described in the subsection captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting H;im Employment by a Government Entity"). Fair Market value foi this purpose will be determined as the date that the shares wtie d'Sfibuied

Form and Purpuse of Award

Exhibit 10.23 (U.K.)

JPMORGAN CHASE C CO LONG Tr.RU <http://Tr.RU> INCfNTrVE PLAN TERMS AND CONDITIONS OF JANUARY 17 2017 RESTRICTED STOCK UNIT AWARD OPERATING COMMITTEE (Proieciion-Based vesting Provisions)

These terms and conditions .ire made pari of ihe Award Agreement dated as ol January 1 7. 201 7 ("Grant Date") awarding iest:icied siock units nirsuani 10 meieims 0! ihe JPMorgan Chase R Co Long lei.n incentive Plan ("Plan") To the e«cr; ihe terms ul ihe Award Agreement (all referent es 10 which will include these lenns and conditions) tnnilic; wilh ihe p:.in. ir-eS'ian wil. fjovcrn the Award Agieeinem. the piar. and Prospeciuswirjursedc any oilier arji cement, wneihei written 01 omi iii.ii may nave been enieied i.-ro by tne Firm and vou reeling to tnis aw.i;rt

This award was granted on tlie Gram Date subicci to the Award Agreement Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of ihe Giant Date. M vnu decline the award, it will be cancelled as ol the Grant Date

1 "F^limiiuns" below or elsewheie in the Award Agreement will have the same meann

." and together with us subsidiaries

Cach;eMnc:ed stock uml represents a non transferable nglu to receive one Share of Common Sunk asof the an pin ame vestini date as set forth in your Award Agreement

The purpose o! this award is to motivate your future performance lor services to I* provided during ihe ve-mng period and tc a!isn your mteresis with those of the Firm and its shareholders

1! dividends are paid on Common Stock while restricted Mock units undei llus award are 01 it Standing, vou will lie n.ud an amount equal to the dividend paid on one Share ot Common Stock, multiplied by the number of restricted stock units outstanding under trvs award as of the dividend record date

UK Clawback Policy for Identified Staff

This award is intended and expected to vest on the vesting datc(s). provided that you are continuously employed by the firm through such vesting date, or you meet the requirements for continued vesting described under the subseciions "-Job Elimination." "--Full Career Eligibility," "-Government Office" or "-Disability." However, veiling and the number of restricted stock units in which you vest are subject to these terms and conditions (including, but not limited to, sections captioned "Rer.ap.ti/re_ <http://Rer.ap.ti/re_>Provisions." "Remedies" and the following protection-based vesting provision)

Up to a total of fifty percent of your award that would otherwise be distributable (0 vou during tlie vesting period ("At Risk restricted stock units") may be cancelled II the Chief Executive Officer of JPMorgan Chase ("CFO") determines in his or her sole discretion that cancellation of all or portion of the At Risk icsirided stock units is appropriate in liglK of any one or a combination of the following factors.

Your performance in relation to the priorities for your position, or the Firm's performance in relation to the pnonties for which you share responsibility as a member ot the Operating Committee, have been unsatisfactory for a sustained period of tune. Among the I act on the CEO may consider in assessing performance are net incoine. total net revenue, return on equity, earnings per share and capital ratios of the Firm, both on an absolute basis and. as appropriate, relative to peer firms.

For any calendar year ending during the vesting penod. JPMorgan Chase's annual pre-tax pre-provision income at the Firm level is negative

Awards granted to participants in a Line of Business for which you exercise, or dunng (lie vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line ot Business did not meet its annual Line of Business Financial Threshold.

The rirm does not meet the Firmwide Financial Threshold

In the event lhai your employment terminates due to "Job Elimination," "Full Career Eligibility." Government Office" or "Disability thereby enndmgyou to continued vesting in your award (or potentially acceleration due to satisfaction of the Government Office Requirements), the cancellation circumstances described above will continue to apply to your M Rr^k restricted stock units pursuant to the section captioned "Accelerated Distribution For Ethics or Conflict Reason; Resulting Fj;orn_rj[ipjrjYnir;nt by a Government Entj |y_"

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management (development Committee of the Board of Directors of JPUorgan Chase ("Committee"), in the case or an award to (he CEO, all such determinations shall be made by the Committee

The period from the Grant Date lo the last vesting date is the "vesting penod" (see subsections captioned "--Amendment" pursuant to which the Firm may extend the vesting period and '-No Ownership Right;" pursuant lo which tne Firm may place restrictions on delivered shares ol Common stock following a vesting date)

as of each vesting date, you shall be entitled to a distribution equal to the Fair Market value oF the number of restricted stock units vesting on such date, less (he number being withheld to satisfy tax withholding obligations You auree that the distribution made (oyou wift be field man account in your name with restnctions preventing you horn transferring, assigning, selling, pledging or otherwise encumbering such distribution tor a six month period commencing with the vesting date Such restrictions Shall lapse in event of your death

in consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recou;iment Policy (or successor policy) as in effect hum time to time as it applies both to ihe cash incentive compensation awarded ro you fo: performance year J016 and to this award You can access this policy as currently in eflect through lhe lollowmg link. frlto//www.ioroorfar«haje.cor^ <http://www.ioroorfar%c2%abhaje.cor%5e>

For the avoidance of doubt, nothing in these terms and conditions in any way limns Hie rights o(the Turn under the JPUorgan Chase Bonus Recoupment Policy (or successor policy)

In consideration of grant oF this award, and without prejudice to any other provision of this Awaid Agreement, you agree that you are subject to the JPUorgan chase Clawback Policy for Identified Staff or successor policy as m effect t:om time to time as it applies both to the cash incentive compensation awarded to you tor performance year 201 h and to ihis awaid You can access this policy as currently in effect 111 Uy Rewards through the following link, https //myiew.itds ipmchase net/ myrewards

Notwithstanding any terms of this Award Agreement to the contrary, JPUorgan Chase reserves the right in its sole discretion to cancel up to 100% of your outstanding restricted stock units under this award and. to the extent set forth in "Remedies" below, 10 recover from you up 10 an amount equal to the Fair uartet value (determined as of the applicable vesting date) of the gross

Recapture Provisions (Detrimental

ReU^ed\nd Other numocr of shaies of Common Stock previously distributed (including shares withheld for tax purposes) under this award if Ihe n us sole discretion determines thai.

this award was based on materially inaccurate perlormance metrics, whether or not you were responsible tor the inaccuracy, or

this award was based on a material misrepresentation by you, or

you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, nsks and/or concerns with respect to risks material to Ihe f irm or us business activities, or your employment was terminated for Cause (see section captioned ~pefinjhon.i" below) or, in ihe case oF a determination after the termination of your employment, that your cmployneut could have heen terminated for Cause See section captioned "Remedies." For additional information.

JPUorgan Chase's right to cancel and/or recover the value of this award (or any cash bonus) under the IPuorgan Chase Bonus Recoupment Policy and the other provisions of thisaward relate (o (he "organizational goals" oF (he Firm as that term is defined by regulations issued under Section 409A of the Internal Revenue Code ("Code")

mattonof Except as explicitly set forth below under the subsections captioned "-Job Elimination." "-Full Career Eligibility." "--syment Government Office" or "-Disability" below or under the section captioned "Qeain," any restricted stock units outstanding under this award will be cancelled effective on the date your employment with the Firm terminates tor any reason.

Subject to lhese lei ms and conditions (including, but not limited to, sections captioned "Protect ion-Based vesting." "Bonus. pecoiiiirnx_nj_* "Recapture Provisions.[1] "Your Obi-nadons" and "Remedies"), you will oe eligible (0 continue to vest (on the original vesting schedule) with respect to your award in accordance with us terms and conditions following the termination of your employment il one of (he following circumstances applies to vou

> Job ion Elimination Elimination

In the event lhat ihe Director of Human Resources or nominee in his or her sole discretion determines that the Fum terminated your employment because your job was eliminated, arid

after you are notified that your job will he eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and

you satisfied the Release/Certification Requirements set forth below

un Bcs-uirces o> »
m nii or npr sole ciscie'.lon fleitm

vou voluntarily terminated vuur employment wuh tne Firm, nad completed at least five years o! continuous servm with the Firm immediately preceding your termination date ind

your Recognized S-.TviceUsdefmed below) on you'daieoliernwi.non equaled oi"e«*efiP8 I Svea's or vou-'. nmtiim-c Rccugn;/efl Service with the Firm and external professional experience (as atlesied by vou to tne ruin) i-anaied en exceeded 30 years, and

you two tided at least vO days advanco written notice to the funi ot your intention 10 voluntarily rerminjic- vom employment under this provision, during which notice period you nrovuled such services as requested ny the Firm u a cooperative and piofessional manner and you did not per loi m any services 'o' any othei er mil over. and

won and wi I nc based
continued vesting snail be appropriate whicn determination shall be made pnor loyt on your performance and conducl Chef ore and after providing notice) and

tc 36 months lrom the date of grant ol this award you do not either per (or m services in any capacity (including sell empltyincM) tor a Financia- Services Company fas defined below) in winV m your piolmior (whrtiter or not ior a Financial Sei vices Company), provided chat you may wort (in t government education or noi ior-i'rchi Or rjamzatinr (as defined beiow) and

you satisfy the Rele.isc/Certilicauon Requirements set forth below

After receipt nl such advance writ (en notice the Firm may choose (n have you coniinue lo provide services dunncsuch 90-dav period as a condition to continued vesting m shorten the length n! the 90-day period at (he Firm's discretion, but to a date no earlier than the dale you would otherwise meet the service requirement

Additional advance nonce requirements may apply for employees subject to nonce period policies (Sec "Nonce Period' below i

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legist*: sucn snares in tne name ol your beiehciary or e [1]

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-v will be distributed no later nun tne end o< ihe caienda: year immediately tonov.inr,
date oi deatn, mvrewi our adminis:rativc practice is ic n (it> days ul me Firms receuil ol any required document

Your Obligations

in considei.ittoi'. o' the grant ol [tin award, you .lf.r^e to comply win and he bound by the obligations set lorm hciow net ihe suosections captioned "•■won Solitiiaiiwi o! employees and_Custw_ers." "::Conlid('i^al_l!ilonTiatipn ." "__ncj ()'>i!ili!i£"13<ent ' ".-..Coopc-ranon " l_.Com <http://l_.Com>nuance,wilh Award Ajjreemem "and " Notice Period "

I. HK.'LiS

• > Non- During, vour employment by the Firm and for the longer ol the (i) one vcai period following the termination of youi empioymeni Solicitation m (m tl your award 'S not cancelled as of your te'iiunation dale-, the inree year period 1-q.h Giant Dale you will not directly or of indirectly whether on your own behalf or on behalf of any other party withoui ihe prior written consent ol the Uuectur ul Human Employees Ftfcsources. 0) sohcu. muuc.e oi encourage any ol the Firm"s then cur tent employees to leave ihr rumor to apply lor employment and elsewhere, (n) hue any employee or formei employee who was employed by the Firm at ihe dale youi employment torminated, Customers unless the individual s employment terminated because his or hei job was eliminated or the individual s employment wuh ihe rum has been term i mi ted lor more than si x months, (m) lolhe tullesi extent enforceable under applicable law. sohci: o ' induce or attempt to induce tn leave the Fum. t" tlive.ri or attempt to divert lron doing business wuh tne Firm, any ther- current customers, suppliers or oiher persons or entities (hat were serviced by you or whose names became known to you by vulueol your employ men 1 with the Firm, or othei wise interlere with the ioiationship between lhe Firm and such customers, supphcts oi oilier jiersons or entities This does not apply lo publicly known institutional customers that you service after youi employment w.tn lhe Firm without the use of the Tirm s confidential or proprietary information

Tl«sr rt'Hr^tiioi)s no not apply ip authorized actions you lake in rhe normjl nurse al your employment with the Fi employment decisions with respect to employees you supervise or bus.ness referrals m accordance witn the Firm's

- Government Government Office-Office
In thecvcnl lhat you voluntarily terminate your employment with the Firm to accept a Government O'Mce oi become a candidate tui an elective Government Office.asdescribed at the end el those terms and conrt:Nonsuildert^esecriorc,!!Mioned"Gc_re£2 ;r-_".t. Office Requirements" See afso definition of Government Office in the section captioned "Definitions "

- > Disability Pj^bihly

In the event thai

your employment with the Firm terminates because U) you aie unable to return to work while you are receiving benefits under the IPMorgan Chase Long Term Disability Plan, or for non-u s. employees, under theequrvalcm JPMorgan Chase sponsored local country plan (in either case. "LTD Plan";, or («) if you arc not covered by a LTD Plan, you are unable io return to work due lo a long-term disability lhat would quality loi ben el its under the applicable ltd Plan, as determined by the Firm or a third-party designated bv the Firm, provided lhat you (i) request in writing contiiued vesting due to such disability within 30 days of (he date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such tieatmcnt. and

you saltsly the Release/Certification Requirements set forth below

To qualify tor continued vesting after termination of your employment under any of the loregomg circumstances

you must timely execute and deliver a release ot claims in lavor of the Firm, havinjt such form and terms 4S lhe Firm shall specify,

with respect 10 VuM Career Eligibility," prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at le.isi 90 days advance written notification), advise that vou are seeking to be treated as an individual eligible lor "Full Careei Eligibility "and receive wmt en consent to such continued vesting,

with respect (o'Disabilily," you must satisfy the notice and ctocunientationdescnbcdabove and receive written consent (o such continued vesting.

wilh respect to "Full Careei EligiOility." it is your responsibility to take lhe appropriate steps lo certify to trie Fum prior to each vesting date while the employment restrictions are outstanding on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein] from your date of termination of employment through the applicable vesting date, and

m alt cases, complied with all other terms of the Award Agreement. (See section captioned "your ObliJBtierjs')

- > Confidential you will not. either during vou: employment with die Tirm or tnerealtcr. directly ur inducetly (i) use or disclose to anyone any iniormaiion confidential information related to lhe Firm's business, or (u) communicate with the pi est or other media about matters related io tne Firm, us customers or employees, including matters and activities relating to your employment or the employment of others hy the Firm, m the rase of either (it or (<i) excepl as explicitly permitted bv the JPMorgan Chase Code ol Conduct and applicable policies or law or legal process. In addition, following your termination ol employment, you will not. without prior wntien authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning tor the Award Agreement as it has in tlie JPUorgan Chase Code of Conduct

Nothing in this award precludes you from reporting to the Firm's management or directors, the government, a regulator a sell regulatory agency, vour attorneys or a court, conduct you believe to be m violation of the law or concerns of any known or SuspeciedCodeof Conduct violation. It rs also not intended lo prevent you from responding truthfully to questions or requests lrom the Government a regulator or in a court ol law

• > Non- Youwil! not. enner during youi employment with the Tirm or thereafter, make or encourage others to make any nuldic statement Disparagement oi release any information in verbal, writicn, electronic or any other form, that is intended to. or reasonably could be loresecn to. disparage, embarrass ot criticize the Firm ol its employees, officers, directors or shareholders as a group This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation ol the law or the Fum's Code of Conducl or responding truthfully lo questions or requests for information 10 the government, a regulator or in a court ol law in connection with a legal or regulatory investigation or pioceeding.

• > Cooperation You will cooperate fully with and provide full and accurate information to the Fum and its counsel witn respect to any matter
(including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject lo reimbursement for actual, appropriate and reasonable out-of pocket expenses incurred by you

• > Compliance You will provide the Tirm with any informal ion reasonably requested to determine compliance with ihe Award Agreement, and
with Award you authorize the Firm to disclose the terms ol the Award Agreement to any third party who might be aflecied thereby, including Agreement your prospective employer

> Notice if you are subject lo a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy. Penod that requires you to provide advance written notice of your intention to terminate your employment ("Nonce Period"), then as consideration tor this award and continued em pi oyment. you will provide the Firm with the necessary advance written nni ice lhat applies to you, as specified by such contract or policy.

After receipt of your notice, the Firm may chouse to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period During the Notice Period, you shall continue to devote your full time and loyalty to the Tirm by providing services in a cooperative and professional manner and not perform any services for arry other employer and Shall receive your base salary and certain benefits until your employment terminates, vou and the Firm may mutually agree lo waive or modify the length of ihe Notice Period

Regardless of whether a Notice Period applies lo you. you must comply wiim the 90-day advance nonce period desci ibed under the subsection captioned '--Full Career Eligibility" in the event you wish to terminate employment under thai same subsection

Cancellation In addition to the cancellation provisions described under the sections captioned "Protection-Based Vest inc." "Bujiul Recoupment." "Recapture Provisions" and "Termination pi Emrtovmont,," your outstanding restricted stock units under this award may be cancelled if the Firm in its sole discretion determines that.

you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or

you have failed to return the required forms specified under the section captioned "Release/Certification" by the specified deadline,. or

you have violated any ot the provisions as set forth above in die section captioned "your Obligations-*

To (he extent provided under the subsection captioned "--AmcndjT__ni" below. IPMorgan Crme reserves the rigfit to suspend wstmgottrusawardand/or distribution of shares under this award, including, without limitation, during any period that jpMoifjan Chase it evaluating whether this award ts subject to cancellation and/or recovery and/or whether the conditions tor distributions oF shares under this award are satisfied JPMorgan Chase is not responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be (-instated consistent with Plan administration procedures. See also ■subsection captioned "--hq Ownership Rights

> Recovery in addition, you may be required to pay the Firm up to an amount equal to the Fair U3rket Vxltjetcletermtacdaso! ttie&oottcable vesting date) of the gross number of shares of Common Stock previously distributed undei this award as follows

Payment may be required with respect to am/ shares of Common Slock distributed within the three year period prior to a notice-of-recovery under this section, il the Firm in its sole discretion determines that:

you commuted a fraudulent acl, or engaged in knowing and willful misconduct related to your employment, you violated any of (he provisions as set forth above in tne section captioned "Your Obligations.* 0' you violated the employment restrictions set lorth in the subsection "--Full taieer Fligibihty* following the termination of your employment.

• In addition, payment maybe required with respect to any shares distributed within the one year period prior tonotice-of-recovery under this section, if the Firm in its sole discretion determines appropriate pursuant to tne pi ovisions in the subsection captioned 'Recapture Provisions"

Nolkml-recovery under this subsection is a written (including electronic) notice Irom the Firm to you either requiting payment under this subsection or stating thai JPMorgan Chase is evaluating requiring paymcnl under this subsection without limiting the foregoing, notice-of-recovery will be deemed provided il ihe Tirm makes a good faith attempt (o provide written (including electronic) notice at your last known address maintained in the Firm's employment records For the avoidance o: doubt, a not ice-of-recovery that the Firm is evaluating requiring payment under this suction shall presetve JPUorgan Chase's rights to require payment as set forth above m all respects and the Firm shall be under no obligation to complete its evaluation other than as the Fum mav determine m its sole drscreton

For purposes ol this section, shares distributed under this award include shares withheld lor tax purposes. However, it is the Firm's intention lhat you only be required to pay the amounts under this section with respect tosharesthatareor may be retained byyoufollowingadetermination of tax liability and that you will not be required lo pay amounts with respect loshares representing irrevocable lax withholdings or lax payments previously made (whether by you or the Firm) lhai you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPUorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented hy such withholdings or tax payments.

Payment may be made in shares of Common stork or In cash. You agree that any repayment will be a recovery of shares to which you weie not entitled under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty You also acknowledge lhat a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations, such right to an injunction, however, shall be cumulatrve and in addition to whatever other remedies the firm may have under law or equity

Nothing in the section many way limits your obligations under "Bonus Recoupment"

Withholding Taxes: The Firm, in its sole discretion, may (i) retain From each distribution the number of shares of Common Stock . required to satisfy applicable lax obligations or (u) implement any other desirable or necessary procedures, so thai appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shaies, dividend equivalents and ihe award. This may include hut is not limited tod) a market sale of anumbci of such shares on your behalf substantially equal to the withholding or other taxes, (u) to the extent required hy law. withhold trom cash compensation, an amount equal lo any wuh holding obi i gal ion with respect to the award, shares that vest under this award, a nd/oi dividend equivalcnts.and(iu) retaining shares that vest under this award or dividend equivalents until you pay any taxes associated with the award, vested shares and/ or (he dividend equivalents directly to the competent authorities.

Right to Set Off. The Tirm may. to the maximum extent permitted by applicable law (including section 409A or the Code to the extent it is applicable to you), retain for itself funds or the Common Stock resulting from any vesting ot this award io satisly any obligation or debt thai you owe to (be Firm' Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. Thisresiriciton on the Ftrmdoesnoi apply toaccoum below

No Ownership Rights. Restricted stock units do not convey the nghls ot ownership of Common Stock and do not carry voting lights, no shares of Common Stock will be issued to you until after the restricted stock units have vested and any applicable restrictions have lapsed Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its discretion, to establish on your behalf a brokerage account m your name with the Firm or book-entry account with our stock plan administrator and/or transfer agent and deliver to that account any vested shares derived from the award

Wii.i respect to any applicable vesting date. JPUorgan Chase may impose tor any reason, as of such vesting date for such venod as it may soecily in its soie discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but noi limited in. restricting (he sale, transfer, pledge, assignment or encumbrance of such shares of Common Slock. By accepting this award, you acknowledge thai during sucn specified period should there be a determination that the cancellation or recovery provisions of this award apply, then you agree that any shares subject to such restrictions (notwiiiisundinjj tne limitation set forth sei forth in the Right to Set Off section above) may be cancelled in witole or part (Sec sections captioned "Protection-Based Vesting." "Bonus Recoupment." "Recapture Provisions* "Termination of employment" and "Remedies." as wen as the subsection captioned "-Amendment" permining suspension of vesting)

Bind in, Agieemenl Hie A*.ir 0 Agnjoriiw: ml: he hir.rjiiE uiKjn a-y sunesw .r inti—,! lt. iPurur.n" Cusm In- mfRf nr otherwise

Not ■ Contract of Employment tjoihing contained in the Award Agreement constitutes a tnntuci ol emplovmer.i or continued employment Empioymeni is "a.t will" and may!* terminated ay either vou or jrMorg.w C--*w for anv reason at anytime ins award docs not i order any right or entitlemct lo, nor does :l# award imaose any otiiicrino? on iff r -m\-., iri.yiuc :he same or any similar award m the liiiiue and us value is not compensation for purposes of dd>.'i:rii<iuit severa^c

Sea ion 409A Compliance- To tne extent thai Section *0<>A of ihe Code is .tnulrcable to this award diiinnuuont of sha<es and cash hereunder are intended to comply with Section *OOA of the Code <md ihe Award Agreement including these terms .md COnd11ions, shall be interpreted m a manner (.onsisteni with such intent
Noi withstanding anything herein to the contrary, if you d) aiesuhpect to taxation under the Code (n) aie « specified ernHnyee asdefmed in the JPMorgan Cha\e 2005 Delerred Compensation Plan and (m) have incurred a separanon bom service (;i< defined in that Plan with the exception ol death) and if any umts/shares under this award represent deferred comncnsation as defined in Section 409A and such shares are distributable [under the terms of this award) wnmn sn months following and as a result of your separation from service, then those shares will be deliveied to during ihe first calendar mor.:h .ifiei the exoiraiioe of six full mnnlhs from date of yogr separation from service luilhcr. if youi ,iw,iml n nrn subject loasubsiamjl r'Si of iorfiMure as defined by regulations issued under Section *00A of lhcCnrte. men ihe remainder of each calendar year immediately foMowmg (0 each applicable vesting dale set forth in your Award Agreement shall be a payment dale for purposes ot distributing ihe vested portion ol the award and (n) each date thai IPMorgan Chase specifies for payment ol dividends declared on us Common Slock, shall be lhe payment date(s) lor purposes of disiribuimg dividend equivalent payments

Change in Outstanding Shares In the event of any change ir. the outstanding shares ol Common Stock hy reason of any stoo dividend or spin, recapitalization, issuance of a new class of common stork, merger consolidation, spm-off combination or exchange of shares or other similar corporate change, or any disin but ions to stockholders of Common Slock othei than regular cash dividends, the Commit lee will make an equitable substitution or proportionate adjust iimi in the number or kind nl sli.ncs 'of Common Slock or other secunties issued or reserved lor issuance pursuant to the Plan and to any restricted stock ii;u:s outstanding under this award for such corporate events.

Interpretation/Administration- The Committee has sole and complete authority to interpret and administer tms Award Agreement, including, without limitation, the power to (i)inleipret the Plan and tlie terms of this Award Agreement, (u) determine ihe reason foi termination ol employment, (m) determine application of the post-employ mem obligations .nd cancellation aiMl recovery provisions, (iv) deciqe all claims arising wilh respect lo this award, and (v) delegate such am Horny as it deems appropriate Any determination contemplated hereunder bv ihe Commiitee. the Firm, the Director of Human Resources or Mien res pec live delegates or nominees shall be binding on all parlies.
Notwithstanding anything herein to the contrary, the deter mi nations of the Director of Human Resources theTirm lhe Committee and their respective delegates and nominees under the Plan and lhe Award Agreements are not requiredlorjcun.form Byway of clarification, the Committee, the Firm, ihe Director ol Human Resources and then respective delegates and nominees snail be entitled to nuke non-uniform and selective determinations and modifications under Award Agreenejnis and the Plan
Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, al any time and for any reason; provided, however, that no such amendment shall materially adversely alien your ngnts under this Awa-d Agreement without your consent except to the extent that the Committee or its delcgaic considers advisable to (x)compiy with applicable laws or changes in or interpretation ol applicable laws, regulatory requirements and accounting rules or standards andAx (v) make a change in a scheduled vesting date or impose the reslricliorts described above under "no Ownership Rights," in either case, to the extent permuted by Section 409A ot the Code if it is applicable you This Award Agreement mav noi be amended except in writing signed by the Director of Human Resources of JPMorgan Chase

Severability If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction any court or arbitral oi of competent junsdictwn or the Director of Human Resources may reform the relevant provisions (e.g , as to length of service, tune, geograph-ial area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law

Accelerated Distribution lor Ethics or Conflict Reasons Relullinf, Horn Employment hy a Government Entity Upon r»r«:;i: nl satisi.inmv evidence thai aaphcitur unued Siatesl-.-dei.il <http://Siatesl-.-dei.il> si.ite un.il <http://un.il> foreign o- supra national eih'cs or conflict nr uuv-esi laws or i^iiiauons ipquire you tn oivesi vou- mteresi .n icuoigan Chase lesinciitf s:oc> umts in* tirm may accelerate ;he disinoui-on of all oi ;un ol voui outstanding awaid efler.tiv* on or before im; required ilrve'.niure dme provided that no acrelerateddisti mmum sr:ai: i<cuf il tne Firm deter mnes mat sum acceleration will violate Section *09A til the Code

if voir have voiunta'ily lermmaied your einiiioymem aid nave sai-sned tne requirements o: irt? sc-cnon cannoned "Government Office Requirements." acceleration shall apply do extent required) io the percentage of vour outstanding award that would continue to vest under that section in tne case of a termination ol emuioyment witere the award is outstanding as a result ol lhe subsections entitled "Job Elimination" or "Full Career Eligibility" then acceleration shall apply to the extent required to the fiii'iiutsi.Hiding awa'd

Not wuhsiand.ngaccelerated distribution pursuant to tne lo'cgoing. you will remain subiect to the applicable terms of your Award Agreement as i! your award had remained nut si and in _ for tne duration ol the original vesting period and shares had oeen distributed as scheduled as of each applicable vesting dale, including hut not limited io, repay mem tililig.it <http://tililig.it> ions set forth mihe section captioned "Remedies" and the employment restrictions m me sections captioned "Prnieciion-Based Vesting" and "Government OHicc Kcnuuemenis" and the suoseciuni "Full Career Eligibility "

use of Personal Oa l a. By accepting this award, you ruve acknowledged that the firm may process vour personal daia (including sensitive personal data) lor purposes, including but not limned lo(i) determining your compensation, (ii) payroll activities including, but not limited ta tax wiihhpldinj; and regulatory reporting, winch tax and regulatory reporting and withholding may include, but is not limned to, lhe united Slates your work country (including countries to which you (ravel on Finn I nr. mess) and cniiiilry ol residence, (m) legislation of shares and units, (iv) establishing brokerage account on your behalf, and (v) all other lawful purposes related to your employment and (his award and (ha: (lie Firm may pmvide such data to third party vendors with whom it has contracted to provide such services and/or other bodies, including regulators, supervisory bodies law enforcement and othei government agencies vou are acknowledging and agreeing lhat your perwn.il <http://perwn.il> data will be translerred in, and processed in, countries and lout ions lhat do not have (be same data privacy laws and statutory prelection lt* pe-sonal daia as your work country country of residence, or country ol nationality <f your persona' data is subiect to data privacy laws or statutory protection fot personal data and they so provide for termination of ihe foregoing authorization you may terminate tlie authorization at any time except with respect to tax and regulatory reporting and subiect always to the Firm's legal and regulatory obligations. In the event you terminate tms authorization your award will be cancelled

Governing Law tins awaid shall be governed by and construed in accordance wilh (he taws o! the State of New York, without regard to conflict of law principles.

Choice of Forum By accepting [his award under (he Plan, you agree (and have agreed) that to the exlent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or inducetly in connection with this award <x (he Plan shall be submitted to arbitration in accordance with the rules of (lie American Arbitration Association il so elected by the Firm in its sole discretion In the event such a dispute is not subiect to arbitration tor any reason, you ag'ee to nccepi exclusive jurisdiction and venue of the United States D:stnci Court for the Southern District ot New York with respect to any judicial proceeding in connection with this award or lhe Plan You waive, to the fullest extent permuted by law. any objection to personal jurisdiction or to lhe laying of venue of such dispute and further agree not lo commence any action arising out of ui (elating to this award or (he Plan in any other (orum

Waiver of Jury Trial/Class Claims By accepting this award, you agree, with respect to any claim b'ougtit m connection wuh your employment with the Firm in any forum (i) to waive the right to a jury trial and (u) lhat any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate m a representative capacity or as a plaintiff, claimant or member in a class action, collect me action, or other representative or joint action

Litigation,- Dy accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by the Firm (o(her than a de'ivalivc suit in the right of the Firm) loenlnrre the terms and conditions of this Award Agreement or any oiher Award Agreement where the Firm is the prevailing party, the Tirm shall be entitled to recover lrom you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree lhat you are not entitled to. and agree not to seek, advancement of attorney feet and indemnification under the Fum's By-Laws in the event of such a suit by the Firm.

Nontransferability- Neither this award or any other outstanding awards of restricted Stock units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hypothecated or subject to any lien. An award may be transferred lollowmg your death by will, the laws ol descent or by a beneficiary designation on file with (he Firm.

Outstanding Awards: TheAdmimstrahve provisions set forth aboveshall apply toany award of resiricted stock umts outstanding as ot the date hereof, and such awards are hereby amended.

"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation uf any law. rule
Definitions or regulation (including rules of self-regulatory bodies) related to the Firm's business, (u) indictment or conviction of a felony,
(in) commission ot a fraudulent 4Ct, (iv) violation of the IPMorgan Code of Conduct or oiher rum policies or misconduct (elated to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job tuna ion or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is iniunous to the interests of the Firm or US relationship with a customer, client or an employee

"Financial Service" Company" means a business enterprise that employs you m any capacity (such as an employee, contractor, consultant, advisor, or sell-employed individual, whether paid or unpaid) and engages in

commercial or retail banking, including, but not limited ta commercial, institutional and persona! trust, custody and/ or tending and processing services, originating and servicing mortgages, issuing and servicing credit cards, paymenl servicing or processli^ or merchant services.

insurance, including but not limited to. guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuilHrs. acting as principal, agent or broker for purpose ol the forgoing.

financial, investment or economic advisory services, including bul not limned tu, investmenl banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in scctiriiies or other similar activities), brokerage services, investment management services, asset management services, and hedge lunds,

issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments.

advising on. or investing in, private equity or real estate, or

any similar activities that theDirectoroi Human Resources or nominee determines in hisor lie sole discretion constitute financial services.

"Firmwide Financial Threshold" means a cumulative return on tangible common equity foi calendar years 2017 2018, and 2019 ol not less than 15%. Cumulative return on tangible common equity means 0) the sum of tlie Turns reported net income for all (hire calendar years, divided by (u) reported year-end tangible equity averaged over (he thtec years

"Government Office" means 0) a ruli-time position in an elected or appointed office in local, state, or federal govcrnmor:: (including equivalent positions Outside the U.S. or in a supranational organization), not reasonably anticipated to be I full-career position, or (u) conducting a hona fide full-time campaign for such an elective public oKice after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office

"Line of Business" means a business unit of the Firm (or one or more business units designated below under ihe definition "Line of Business Financial Threshold' or the Corporate Investment Bank) All Corporate Functions (including the functions of the Chief investmenl Office) are considered a single Line of Business.

'Line of Business Financial Threshold" means Ihe financial threshold set forth below for ihe following Lines of Business based on Ihe Firm's management reporting system

Asset£ wealth Management	Annual negative pre-provision net income [1]
Card. Commerce Solutions. Auto Finjnce and Student	Annual negative pre-tax. pre-loan loss reserve income'
Commercial Banking	Annual negative pre-provision net income including loan charge -ofts
Corporate investmenl Bank	Annual negative pre-pf ovtsion net income lor CIB overall and/or annual negative allocated product revenues (excluding DVA) for
Consumer Banking Business. CWM and Business Banking	Annual negative pre-provision net Income'
Certiorate Functions (including Chief Investment Office)	Annual negative pre-provision nei income [1] reported at the Tirm level
Mortgage Banking	Annual negative pre-tax. pre-loan loss reserve mconie'

- Macro products.
  - Currency and Emerging Markets
  - Rates
  - Commodities
- Spread Products
  - Credit
  - SPG
  - Public Finance
- Equities
- investor Services
- Global Banking

'Pie ui ore provtsnn income means Revenue lest expenses
'Pir-lai pre loan km reserve Income means Revenue less (Expense* plus Hri Ctunz*-oirs)

"Not-tor-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code Section SOI (c)(3) only includes entities organized and operated exclusively for religious, charitable, scieulilic. testing (oi public sately, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals Not-tor-Profit Organization shall also mean entities outside Ihe Unued Staics exempt from local and national tax laws because they are organized and operated exclusively for religious, charitable, scientific, testing tor public safety, literary or educational purposes, or to foster national or international amateur sports competition or tor tne prevention of cruelty to children or animals

"Recognized Service' means the period of service as an employee sei forth in the Firm's applicable service-related policies

Government Office Requirement!

You may Oft eligible to continue vesting in all or part ot your award if you voluntarily rcsxjn to accen: a Government Office (as aefinea above) or t& become a cancxtate for an elective Government Office

Full Career Eligibility
"Government Office Requirements' does not apply to you il you satisfy Ihe subsection captioned '-Full Career Eligibility' as ol the dale thai you voluntanly terminate your employment with the Firm

Eligibility-
Eligibly for continued vesting is conditioned on your providing the Firm

At least 60 days' advance written notice of your intent en to resign to accept or pursue a Government Office (sec section caotioned "De lindens"), during which penod you must perform in a cooperative and professional manner services requested ay tne Finn anrj not provide services lor any othei employer The l~irm may elect to shorten this notice penoa at the ruin s discretion Confirmation, in a form satisfactory lo the Firm, that vesting in this awaid pursuani to Ihis provision would not viola'.e any applicable law. regulation or rule

Documentation in a form satisfactory to the Firm thai your resignation ts for the purpose ot accepting a Government Ofiice or becoming a candidate for a Government Office (See section captioned "Definitions ')

Portion of Your Awards Subject to Continued vesting-
Subject to the condibons below, the percentage of your outstanding awards that will continue to vesi m accordance with this award s original schedule will be based on your years of continuous service completed with the Firm immediately preceding your tc mi ma lion date, as follows

50% i(you have at least 3 but less than 4 years of continuous service. 75% if you have art beast 4 but less than 5 years of continuous service, or 100% if you have 5 or more years of continuous service

The poruori of each award subject to continued vesting above rs referred to as the "CV Award' and the portion not subject to continued vesting will be cancelled on the date your employment terminates

Condition* for Continued Vesting of Awards:

Ycxj must remain tn a non-elective Government Office for two or more years after your employment wilh the Firm terminates to receive in full your CV Award, provided that if your non-elective Government Office) is for a period teas than two years you will bft entitled to retain any porton of the CV Award with a vesting date during your penod of Government Service, or In (he case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the electm (If you are not elected, see below for employment restrictions)

Satisfaction of Conditions:
Il your service m a Government Office ends two years or more after your empioymeni with the Firm term males, or in the case of resignation from the Firm to campaign for a Government Office, your name is on (he primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards thai would have then been outstanding but for an accelerated distnbution of shares (as described in the subsection captioned -Accelerated Distnbution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remander of the applicable vesting penod to the same terms and conditions ol this Award Agreement, including empioymeni restrictions dunng the vesting period, as if you had resigned from Ihe Firm having met the requirements for Full Career Elqbilily

Failure to Satisfy Conditions:
If you do ngt satisfy the above 'Conditions for Continued Vesting of Awards," any outstanding restneted stock units under each CV Award will be cancelled You also win be required to repay the Fair Market Value of Ihe number of shares (before tax and other withholdings] of Common Stock distributed to you that would have been outstanding as restneted stock units on the date you failed to satisfy the 'Condition for Continued Vesting of Awards" but for their accelerated distribution (as desenbed irt the subsection captioned "Accelerated Distnbution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") Fair Market Value foi this purpose will be determined as the datt that the shares were dtstnbuted

Form and Purpose of Award

IPUORGAN CHASE t CO LONG TERM INC* NUVL PLAN TERMS AND CONDITIONS OF JANUARY 17. 2017 PERFORMANCE SHARE UNIT AWARD OPERATING COMMITTEE (Proiection-BasedVestingProvistons)

These terms and conditions <ne riade pari of the Award Agree men! d.ited as (if irinua-y 17 ?Ci]7 ("Grant Dale") award ig performance snare units ("PSUs") pursuant to the terms of the JPMorgan Chase & Co Long-lerm incentive- Plan ("Piar.") io the extern ihe terms o! the Award Agreemeni (all references to which will include these terms and conditions) conflict with tne Plan the I'ijn will govern TneAwardAgrcement ihePlanandProsivciussu:*isede.niyoiheragrecnient whet nei written or nidi luat mav nave been entered into by I be turn and you relating to this award

tins awaid was grained on the Grant Oate subieci io the Award Agreement and Plan unless you decline hy the deadline and in the manner specified in the Award Agreemeni, you will have agreed to he bound by these terms and conditions, effective as of the Grant Date. If you decline the award il will be cancelled as ol the Grant Oate

lavethesjnic-meaning

o throughout the Award Agreement as 'JPM or can ctuse" and together with its

Each PSU represents a non transferable right to require jPMorgar. Chase to trarMer one sh.ue of Co mm on stock following each vestiig date set forth m your Award Agreement Such transfer is hereinafter referred to as a "distribution" and words to a similar effect such as distributed, should be construed accordingly

the pin pose ol tins award is to further emphasire sustained lung-term perio'mance and to align your interests with those of the Firm and its shareholder.

If dividends are paid nn Common Stock while restricted stock units under tms awaid are outstanding, you w.ll be paid an amount equal (o the dividend paid nn one share ol Common Stock, multiplied bv (he numhet ol lesincted stock units ouistand.'n™ under Ifcre award

Number of Performance Shirts Uniti at the end of Performance Penod

Reinvested Dividend Equivalent Share Units

Dividend
Equivalent
Payments

This award is intended and expected to vest on each vesting date set forth in your Award Agi cement, provided that you are continuously employed by the Firm through such vesting date, or you meet ttie requirements for continued vesting described under trw subsections "-Job Elimination." "--Full Career Eligibility." "--Government Office' or "--Disability" However, vesting and ihe number of PSUs that will vest are subject to these terms and conditions (including, but not limited to, sections captioned "Recapture Provisions.' and "Remedies" and the lollowmg protection-based vesting provision) Up to a total of fifty percent of your award (including any associated Reinvested Dividend Equivalent Share Units) thai would otherwise be distnbutable to vou as of any vesting date ("At Risk PSUs") may be cancelled if the Chief Executive O'fu er of JPMorgan Chase ("CEO") determines in hrs or her sole discretnn that cancellation of all or portion or the At Risk PSUs is appropriate in light of any one or a combination of the following factors.

Your performance in relation to the priorities tor your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, havebeenunsatistacio-y for a sustained period of time. Among the factors the CEO may consider m assessing performance are net income, total net uwiut earnings per share and capital ratios ot the rum, both on an absolute basis and. as appropriate, relative to peer firms.

For any calendar year ending during Ihe vostingpenrxl. JPMorgan Chase'sannualprc-iaipie-nrovision income ■t ihe Firm fevcf ts neeative.

RSU awards granted to participants in a Line ol Business for which you exercise, or during trie vesting penod exercised, direct or indirect responsibility, were in whole or in pan cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.

The Firm does not meet the Fiimwide Financial Threshold For avoidance of doubt, cancellation ol the At Risk PSUs. in whole or part, tor one or more nf the above factors may occur prior to the end of the Performance Penod and the maximum number ol At Risk PSUs subject to cancellation prior to tne end of the Performance Period will be up to fifty pciccnt of the Target Award Number

tn the event that your employment terminates due to "Job Elimination," "Full Career Eligibility." "Government Office" oi "Disability" thereby entitling you to continued vesting in your award (or potentially acceleration due to satisfaction ol the Government Office Requirements), the cancellabon circumstances described above will continue to apply to your Al Risk PSUs during the vesting period pursuant to the section captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting from Employment by a Govei nment Entity

Any determination above with respect to protection-based vesting provisions rs subject to ratification by the Compensation and Management Development Committee of (he Board of Directors of JPMorgan Chase ("Committee") in the rase of an award to the CEO, all such determinations shall be made by the Committee. Subject (0 any cancellation in whole or part of your award pursuant to these terms and conditions

Performance calculation The number of PSUsat the end of the Performance Penod will be the sum of the number ol the Annual PSUs divided by the number of years in the Performance Period, plus

an additional number ol Stock units based on Dividend [quivalent Share Units (earned duiinfi ihe Performance Period)

The number of PSUs determined above will be subject to the Qualitative Performance Factor (as detailed below), which it the Committee determines lhat such an adjustment ts appropriate, will be applied following the end ot each year during the Perlormance Period, to adjust downward the number of Annual PSUs Additionally, the Committee, in us discretion, may nuke a qualitative performance assessment based on the entire three year Perlormance Penod and apply Qualnalive Performance Factor to Che entire number ot PSUs determined above

bee sections captioned, "taleiilation of Relative Performance" and "Definitions."

Delivery ot vested shares of Common stock to your accounl wil; be made not later than the date specified in the last senientc of the subsection captioned 'Section 4p9A Compliance"

if dividcndsare paid on Common Stock during the Performance Perwd while the award is outstanding, additional share units representing shares of Common Stock will be allocated (o your award as calculated in (firs section rne number, (f any. mil be based on the dividends that would have been paid during the Pcrlormanc e Period as of each dividend payment date on (he number ol PSUs, If any. determined pursuant to the Performance Calculation set forth above, and treated as if reinvested m additional shares of Common Stock on each dividend payment based un the Fair Market Value of one share of Common Stock on each dividend payment date ("Reinvested Dividend Equivalent Share Units')

After the end of Performance Period, if dividends are paid on Common Slot k wnile PSUs (including Dividend Equivalent Share Units) under this award are outstanding, you will be paid an amount equal to the dividend paid On one share of Common Stock, multiplied by the number of PSUS (including Dividend Equivalent Share Units) outstanding under ihis award as of each dividend record daie

Calculation of Performance Ranking

UK Clawback Policy lor identified Staff

The net number of shares of Common Stock (alter tax and all other lawful withholdings)in which you have vested, if any, as ol the any vesting date will tie held in an account in your name with restrictions preventing you from transferring, assigning, selling, pledging or otherwise encumbering such shares lor (0 a six month period measured from each vesting date, and (i:) a two year period for such shares vesting on March 25th. 2020, and a one year period for such shares vesting on March 25th. 2021. with the holding periods running concurrently Such restrictions shall only lapse, prior to the expiration of the holding Penod, in the event of your death or for an accelerated distribution for ethics or conflict reasons See section captioned, "Plidh" and subsection captioned. "Accelerated Distribution fur Ethics oi Conflict Reasons Resulting From Employment by a Government Entity"

For purposes of the Performance Ranking, (he Ranking of (he Firm and ot each Performance Company for each year in Ihe Performance Period shall he determined and calculated by the Calculation Agent, using the definitions of "Annua! PSUs." "ROTCE." "Average Tangible Common Equity." (if otherwise applicable) "Firm Reported ROTCE" and "Performance Table' (including its fool note) asset forth in [he Definitions section of these terms and conditions See section captioned, •pclinitions" Exrept for Firm Reported ROTCE. calculations will be expressed as a decimal to the second place (i e xx.yy%) See section captioned. "Definitions-Performance Table" in ihe event ol a be All performance based calculations as set forth he'ein are funding and conclusive on you and your successors.

Determination of Qualitative Performance Factor. Annually during (he Performance Period, the Committee will formally assess your qualitative performance based on 4 broad categories (l) Risk ft Control. (2) Customers & Clients. (3) People & Leadership, and (4) Financial Results, ll (he Committee del ermines that your performance "Meets' expectations, no downward adjustment to your Annua! PSUS for that year shall lake Place (and the Qualitative Perlormance Factor shall be 100%) ir the Committee determines that your performance did "Not Meet" expectations, the Committee shall determine whether a downward adjustment is appropriate, and if so. to what extent. A downward adjustment could result in a Qualitative Performance Factor of between 0% and 99%. depending on the circumstances. Dunne Ihe Performance Penod. a 0% Performance ractor tor each year m the Performance Penod would reduce Annual psus to zero, resulting in the cancellation of award with no shares vesting

Additionally, the Committee may. in its discretion, may make such assessment of your qualitative performance based on youi performance dunng the entire three year Performance Period and apply the Oualiiative Performance Factor to the entire number of PSUs determined under section captioned "Humber of Performance Share units at the end of the Performance Penod " in the case of a Oualiiative Performance Factor of 0%, the award would be cancelled

The Qualitative Performance Factor shall only be applied, if applicable, during your employment with [he Firm, or as soon as administratively practical

in consideration of the cram of this award, you agree ttiat you are subject (o the IPMorgan Chase Bonus Recoupment Policy (or successor policy! asm effect from time to time asil applies both to the cash incentive compensation awarded lo you for perlormance year 2016 and to this award you can access this policy as cunenify m effect through the following link.

htto //www lpmorga ncna se.com <http://se.com> /c orpo ra te/A bou (-) PM c A orpora t e ■ rover na nc e-pr i ntjjil es. hi ml recoupment

For the avoidance of doubt, nothing m these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy)

in consideration of grant of this aw.ird. and without prejudice to any other provision of this Award Agreement, you agree that you are subject to the JPMorgan Chase Clawback Policy for Identified Staff ot successor policy as in effect from time tu lime as it applies both to the cash incentive compensation awarded to you foi performance year 2016 and tn this award you can access this policy as currently in effect m My Rewards through the tallowing hnx. h tt m. //m vrcwards. i p mc has e. net/ 0!¥!fi*U'.tJi

Recapiure Provisions (Detriment*! Conducl. Risk-Ret j ted and Other Recapture Plovisions) enutdiloi)the r-11

Nuiwuhsiandmg jnyl'.'rmsol Wis Award Agrcemerl to ine COiiira-'v FMorr^in Chase rese:vesr'frr-i;lii i:s «.oi'-iVsm to cancel up to !00%o1 vour award (lor the avoidance ol doutu inc'uding jny Reinvested [imaenti Cciuivattn: Vi.ire u and io the cxiem set Uinh m "Remedies" he-low to lerovtr Irom you up 10 an amount r-oual 10 ihe fju u.nvr>i \ (clete'mined as ot any vesting date) nf ihe gross numner ol shaies o! Common Stoci previously (list -United (including vc sMares subject to ihe holding Requirements and shares withhe:d tor ta> or othei l.iwlul tiunuiji-sj undr r-% .itv.rf: Tirin in its sole disc re [tor. determines that

n insofar as it causes mate: ial linano.il <http://inano.il> m vou volmi; with me m date ol tor

n!r terminated vcmr employment wiintni-1 irm had completed at le.ssi live vears ot continuous soru m immediately preceding vow termination Gate, your Recognized Service (as nefmed Helen") on vi unation equaled 01 e«< eeded ! 5 years and

you provided al least 90 days advance written nonet to she Fjrm 0! your ■-.tent'OF tc voluma'iiy terminate your employment undei ihis provision dunng wf-.ich notice iifnorj vou provided sucn services as leouested bv the fum in a cooperative and fHolessmn.v. manner and you did not perform any services for any other emmoyci. and

this awaid was based on materially inaccurate performance metrics wnethei o' not ynu were n".:i»i>s :>■£ (or the inaccuracy, or

this award was based on a material misrepresentation by you. or

you improperly or with gross negligence failed to identity, raise or assess m a timely manner and as reasonably expecied, r-sks and/or concerns with respect to risks material io the Firm oi us business anivmcs. or

your employment was terminated lor Cause (see section captioned "Dei inn ions" beiow) or m the case of a determination after the termination of your empioymeni, that your employment could have heen le'minaied lor Cause

See section cannoned and 'Remedies' tor additional information on cancellations.

lPuorgan Chase's right to cancel and/or recover the value of ihis award under the jPMorpm Chase Bonus Recoupmcni Pohcy and the other provisions of lhis award relate to the "organizational goals" ot the Firm as thai if rm is defined by regulations issued under Section 409* of the internal Revenue Code ("Code')

Except as explicitly set (orth below under the subsections captioned "-lob Elimination." "--foil Career rhgiu'luy' "--Government Office' or '--Disability' or under the section captioned "Death.' this award (for avoidance oi doubt, including any Reinvested Dividend Equivalent Share Units) will be cancelled in lull effective on the date you; employment witn the I urn terminates 'or any reason

Subject to these terms and conditions (including, but not limited 10. sections captioned ■Pipi.Ktion.B.jsefl.yestiiii" "Bo.?"* ttecQLinmenL* 'UK Clawback Policy lor identified Staff.' 'Recapture Provisions." "Lemed.ici" and "YquiJlbli gat ions/) you will be eligible to continue to vest (on the original vesting schedule) with respect 10 your award in accordjnie with its terms and conditions following the termination uf your employmeni if one of (he following circumstances applies to you

in (lie event that the Director of Human Resources or nominee in his or her sole discretion dele: mines that (he Firm terminated your employment berause your job was elimmaied.and

after you are notified that your job will be eliminated, you provided such services as requested by ihe Firm m a cooperative and professional manner, and

you satisfied the Release/Certification Requirements set lorih tielow
d alt 1

>on shall be marie prior 10 voui termiuatm' provid ng nn:ice) Jnil

for 3b months the date of grant oi this award. you do not either perform services in any capacity (including sell employment) lor a Financial Sei vices Cuninany (as defined below) 01 work in your profession (whether or not lor a rin.inri.il <http://rin.inri.il> Services Company), provided nat you may work ior a government education or Not iui-Prolit O'Banizalioii (us defined lielow) and

you satisfy the Rcicase/Cerlificatioii Requirements set forth below

After receipt of such advance written notice, Ihe Firm mav choose 10 have ynu continue to provide services during such 90-day period as a condition to continued vesting or shorten the lenglh of the 90-d.iy penod .11 tne r-irm's discretion, hut 10 a dale no earlier thjn the dale you would otherwise meet the service requirement

Additional advance nonce requirements mav apply for employees subject to notice penod policies (See "Nonce Penod' below)

> Government Government Office-Office
tn the event that you voluntarily terminate ynui employment with the Tirm lo accept 1 Government Olfice or become a candidate lor an elective Government office asdc-scribcdailheendof theseiermsandcondmonsunderthescctio'icaptioned "Gnvernmcnt Qffire Requirements ".See also definition ol Government Office in the section captioned "Definitions "

• > Disability Disability

in the event thai

your employment with Ihe Tirm terminates because (1) you are unable to return to work wtuie you are receiving benefits under Ihe JPUorgan Chase Long term Disability Plan, or tor non-U S employees, undei the equivalent IPMorgan Chase-Sponsored local country plan (in either case. "LTD Plan"). or (11) if you are noi covered bv a Lib Plan, you are unable to return to work due to a long-term disability thai would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm, provided that you d) request in willing continued vesting due to sucr. disability within 30 days of tne dale your employment terminates, and (y) provide any requested suppormg documentation and (r) receive the Frm's wntter consent to such treatment, and

you satisfy the Release/Certification Requirements set forth below

ase/ To quality tor continued vesting after termination of your employment under any of the foregoing circumstances

ihcation ^ ^ nmely execute and deliver a release of claims in favor ot the Firm, having such lorm and lerms as the Firm shall specify.

with respect lo Full Career Eligibility, prior to the termination oi your employment, you must confirm with management thai you meet the eligibilitycriteriadncluduigoiovidingaticasi 90 days advance written notification), advise that you are seeking to be treated as an individual eligible for F-uM Career Eligibility, and receive written consent 10 such continued vesting.

with respect to Disability, you must sansiy the notice and documentation described above and receive written consent to such continued vesting, and

with respect to FuN career Eligibility, it is your responsibility 10 take (he appropriate steps to certify to the Firm prior to each vesting date while the employment restrictions are outstanding that you nave complied with the employment restrictions applicable to you (as described herein) Irom youi dale of termination of employment through the applicable vesting date and in all cases, otherwise complied wit hall other terms of the Award Agreement (See section captioned "Your Obligations" below)

Death If you die while you are eligible to vest in this award, your designated beneficiary on tile with ihe rum's Stock Administration Ocpariment (or your estate or if no beneficiary has been designated or survives you) may be entitled to receive a distribution of a number ol shares of Common Stock associated with your award.

Should you die after (he end of the Performance Pemd, your beneficiary will receive shares of Common Stock equal to any outstanding PSUs (including Reinvested Drvidcnd Equivalent Share Units!

Should you die during the Performance Penod, your Beneficiary will receive shares of Common Stock based ur. the Annual PSUs for each completed calendar in the Performance Period prior to the date of death and Annual PSUS based on Target Award Percentage equal to 100 percent for any remaining calendar years in the Performance Penod. provided that Reinvested Dividend Equivalent Share Units will be based on dividend equivalents through the date or your death Any shams will be distributed no later than the end of (he calendar year immediately following ihe calendar year whicr contains your date of death; however, our administrative practice is to register such shares m the name of your Kneficiary or estate within 60 days of the Firm's receipt of any required documentation.

Your Obligations in consideration of the grant of this award, you agic* to comply with and he hound I»y the obligations set forth below ne»t to the subsections captioned "--Non-Solicitation of Fmployees and Customers," "--Confidential Iniormaiion.' "--Noi. Disparagement," "--Cooperation," '--Compliance with Award Agreement," and "-nonce Period"

• y Non- DunngyourempkTvmentrwtheFirmandlorthclongw Solicitation or, (ii) if your award is not cancelled as of your termination date, the ihree year period Irom Grant Dale., you will not directly of or indirectly, whether on your own behall or on behalf of any other jiarty, without the prior wnlten consent of the Director Employees of Human Resources. (1) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply and lor employment elsewhere. (11) hire any employee or lormer employee who was employed by the Firm at the dale youi Customers employmem terminalcd. unless the indrviduars employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated lor more than six months, (m) to the luilest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert 01 attempt 10 divert from doing business with the Firm, any then current customers suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without (he use ol the Firm's confidential or proprietary information.

These restrictions do noi apply to authorized actions you take m the normal course of your employment with ihe Firm, such as employment decisions with respect to mployeesycw stipervise or business refenalsmaccordance with the Firm's policies

• > Notice Period If you are subject to a notice period or become subject to a notice penod after the Gram Date, whether by contract or by policy, that requires you to provide advance written nonce of your intention to terminate your empioymeni ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice thai applies 10 you, as specified by such contract or policy.

After receipt of your notice, the Firm may choose to have you continue to provide services during (he applicable Notice Period or may place you on a paid leave lor all or part or the applicable Notice Period During the Notice Period, you shall continue to devote your full tune and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services fur any other employer and shall receive your base salary and certain benclits until youi employment terminates, you and the Firm may mutually agree to warve or modily the length of the Notice Penod

Regardless or whether a Notice Period applies to you, you must comply with the "0-day advance notice period described under the subsection captioned "-■ Full Career Eligibility" in the event you wish to terminate employment under that same subsertion.

remedies

> Cancellation In addition to the cancellation provisions described under the sections captioned 'Bonus Recoupment." "ProTccnon-Uiisi?'.! vesting.* *UK Clawback Policy lor identified Staff." *Oualitative Performance Faciut." 'Termination of Empioymeni" and "Recapture Provisions." your outstaivling PSUS undei this award may be cancelled if tlie Firm in us sole discretion determines

you have failed to comply with any of the advance nonce/cooperation requirements or employment restrictions applicable lo your termination of employment, or

you have tailed to return the required lorms specified under the section captioned "Relcase/Certificauon* by the specified deadline, or

you have violated any of tne provisions as set forth above rn the section captioned "Your Obligations' To the extent provided under the subsection captioned "-Amendment" below. JPMorgan Chase reserves the nghl to suspend vesting of this award and/or distnbution ot shares under this award, including, without limitation, dunng any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distnuutionsof shares under this award are satisfied The Firm is noi responsible for any price fluctuations during any period ot suspension and, if applicable, suspended umts will be reinstated consistent with Plan administration procedures. See also "Administrative Provisions-No Ownership Rights "

• y Confidential you will not, either during your employment with ihe Firm or thereafter, directly or indirectly (i) use or disclose to anyone Information any confidential information related to the Firm's business, or (u) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to youi employment, or the employment of others, by the Firm, in thecase of either (1) or (u). except as explicitly permitted by the JPMorgan Chase Code ol Conducl and applicable policies or law or legal process In addition, following your termination of employment, you will not, without prior written authorization, access Ihe Firm's private and internal in lor mat ion through telephonic, mlranei or Internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has m the JPMorgan Chase Code of Conduct.

Nothing rn this award precludes you from reporting to the firm's management or directors, tlie government, a regulator, a self-regulatory agency, your attorneys or a court, conduct you believe lo be ir. violai ion of the law 01 concents of any known or suspected Code ot Conduct violation It is also not intended to prevent you from responding truthluliy to questions 01 requests from the government, a regulator or in a court of law

• > Non- You wiT not, either during your employment with the Firm or thereafter, make or encourage others to make any public Disparagement statement or release any mlormation in verbal, written, electronic or any other form, tii.it <http://tii.it> is intended to. or reasonably (ouid be foreseen to. disparage, embarrass or criticize the Firm or its employees, oflicers. directors or shareholders as a group This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Turn's Code of Conduct or responding truthfully to questions 01 requests (or information lo ihe government, a regulaloi or in a court of law in connection wuh a legal nr regulaioiy investigation or proceeding

• > Cooperation You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any nutlet (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respetl to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-ol-pocket expenses incurred try you

You will provide the Firm with any information reasonably requested lo determine compliance with the Award Agreement, and you authorize (he Firm to disclose the terms ot the Award Agreement 10 any third party who might be allected thereby, including your prospective employer

Co wit Aw Ag

* Recovery inaonuoii io cancellation o' ouistamluig PSUs (including Remvesiefl Dividend Kluivaumi Sna.e umsi vim ni.iv <http://ni.iv> M-'coiMfd lonavine r.rm unto an amount equal 10 fair u.ukru value irteie'mniecl aso! :tn-.isiiiln.inil- ve'.:m[: itjte & jccr'n-r.n :■)-dale) ol ihe g'oss number o sna-cs ol Common Slock previously disintiutcc 'ncmOing ".'Sk-fi srui'/s sunrci to t 'H'Muh: RcQuuenients. unrler tins award as follows

Payment mav be required w.tn respect 10 any shares o'Common Slock wulun toe inree year period p.-or 10 « nonce ol retnvery under tnis section, if the firm in us stile discretion determines mat

you commuted a fraudulent act. or engaged m knowing and williu' misconciuti rei.ued io vou: empioymeni,

you violated any of tne provisions as set form above m [be sect

ii tiie subsection J-uii Career L'iie.

"I'd "Your.OhJijjalions,"

you violated Ibe employment restrictions sei font' termination ol youi employment

in addition, payment may be required with respect to any shares distributed wuflie the one ve.r period prior 10 notice-of recovery under this sccnon, if the Firm in its sole discretion determines .ipproonaie pursiiiini in the ptovisions in tne section above captioned 'Recapture Provisions."

Not ice-of-recovery under this subsecimn is a written (including electronic) nonce liom ihe Firm to you either n'omring payment under this subsection or stating thai iPMoigan Chase devaluating requiring payment under tms su'jsecnnn wunoui limiting the foregoing, notice-ol-recovery will be deemed provided it the Firm makes a good larh .iJiemot io provide wr i:en (including electronic) notice at your lasl known address maintained m (he Turn's employment lecu'tls Tor the avn.flancc-o doubt, a notice-of-recovery that the Firm is evaluating reouinng payment undei this section shall preserve H'tf.orgjn Chase s rights to require payment as set forth above in all respects and the Firm shall be under no obi ganon to complete revaluation othet than as the Firm may determine in its sole discretion

For purposes of this section shares distributed undet this award include stiaresor oiher amouniswiihheld for tax pu'posos However, it is the Firm's intention that you only be required to pay the amounts undei ilus subsection with reined io sh.nes that are or may be retained by vou lollowmg a determination of tai liability and that you will noi be requited to pay amounts wilh respect toshares or other amounts representing irrevocable lax withholdings or lal payments previously made (whi-thei byvotiortherumjthat you will not beable to recover, recapiure m recldim (includingas a tax credit, re'unlln: o:herneielitl Accordingly, JPUorgan Chase will no(require you to pay any amouni that the Fum or its nominee in his or her sole discretion determines is represented by such withholdings or [ax payments.

Payment may be made in shares of Common Stock (if shares are distributed) or in cash you agree lhat any repayment will be a recovery of a distribution to which you were not entitled under the terms and conditions ol youi Award Agieement and ts not to be construed in any manner as a penalty Vou afso acknowledge that a violation or atiempied violation ol the obligations set torth herein will cause immediate and irreparable damage lo lhe Firm and therefore agree that tne Fum shall be entitled as a matter of ngtit lo an injunction. Irom any court of compel em jurisdiction, restraining any violation or lurther violation ot such obligations, such right to an injunction, however, shall be cumulative and m addu<on to whaievei other remedies the Firm may have under law or equity

Nothing in (he section in any way limits your obligations under the section captioned "Bonus ft'cqypment" and "y.KCJawback Policy for identified Staff.'

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non [ha: vest under trrs award and (u>) reta nmg s'lares that vest under this award 1 the award and distribution durcity in ihe comwiem authorities

Right to Set Off The Firm may. 10 the maximum extent permuted bv applicable law (including Set nun *09A o< tne Code 10 (he exem 1; is applicable to you) retain ior usel! (unds v tne shaies ol Common Siock resulting Irom any vesting of this awaid to satisfy any obliga:ion or deht thai vou owe to the Firm, not withstanding any account agreement wnr. tne '• urn 10 the contU'v ihe rum will not recoup or recover any amouni owed -uin any iuids or unrestricteri secunties heid in your name and maintained at the rum pursuant to sucn account agreement to satisfy any obligation or debt or obligation owed by you under this awaid withoui your consent This restrict ionon trie ruuidoes not apolytnaccountsdesiriiiedandauthori.'ed in "no Ownership Rigms' described below

No Ownership Rights PSUs (including Reinvested Dividend Fquivalent Share Units) do noi convey (lie rights of ownership of Common Stuck and du no) carry noting rights. No disirihuiton will he made to vou until after the numtiei PSUs (including Reinvested Dividend Equivalent Share Unas) have been determined, if any nave vested and any applicable lesinct ions (othei tnan Holding Requirement) have lapsed Shaies will be issued in accordance wiW jPUorgar. Chase's procedures (or issuing stock. By accepting this award, ynu authorize lhe I" 11 m. in its discretion to estabbsh on your be hall a brokerage a tc 011 nr in youi name wuh the Firmor book-entry account with our slock administrator and/or transfer agent and deliver to ttial accouit any vested shares denved from lhe award

with resnect 10 any applicable vesting date. JPUorgan Chase may impose for any reason as of such vesnng date lor surfi period as 11 may specify m us sole discletion. such restrictions on the Common Stock lo he issued 10 you as u may deem appropriate, including, bul not limned to. restricting the sale transler. pledge, assignment or encumbrance ol such shares of Common Slock Dy accepting this award, youac knowledge mat dunngsucrispecided period should there bea deter mmaiion tnat the cancellation or recovery piovisions of this Award apply, then you agree that any shares subject 10 such resinf hons (notwithstanding the limitation scl lnrih in the Right 10 Sei Otl section above) mav be cancelled in whole or pan. (Sec sections captioned "Prorection-Based vesting." "Oualiiative Performance racior." 'Bonus Recoupment" "Recapture Provisions," "Termination of Employment" and "Remedies", as well as the subsection Ciipnoued "-Amendment" permitting suspension of vesting.

Not * Contract of Employment No(hingcontainedinthe Award Agrrremenlconstitulesa contract of enuiloymentorcontinued employment Employment is "at-will" and may be terminated by either you or JPUorgan Cnase foi any reason at any tune This award does nor confer any ngh[or entitlement to, nor does (he awaid impose any obligation or. (he Fum to provide (he same or any similar award in the future and its value is not compensation lor purposes of determining severance

Section 409A Compliance- To the extent that Secbou *09k of the Code is applicable to this award, distributions ol shares and cash hereunder are intended to comply with Section 409A of (he Code and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (1) are subject to taxation under the Code. (11) are a specified employee as defined in (he JPMorgan Chase ZOOS Deterred Compensation Plan and (m) have inclined a separation Irom seivice (as defined in that Plan with the exception of death) and if any distribution under tms award represents deferred compensation as defined in Section 409Aand such amounts are distributable (under the terms of Ihis award) willur. six monlhs lollowmg. and as a rcsull of your separation from service, then those amounts will be dunng the fust calendar month after the expiration of six full months from date of vour separation from service. Further, if your award is not subject lo a substantial nsk of forfeiture as delined by regulations issued under Section 4 09A of the Code, then the remainder of each calendar year immediately following vesting date set forth in your Award Agreement shall be a payment dale for purposes of distributing the vested portion of tlie award

Change in Outstanding Shares In the event of any change in the outstanding shares of Common Stock by reason ot any stock dividend or spin, recapitalization, issuance ol a ncwclassnf rommnn stock, merger, consolidation, snm-ofl. combination or exchange of snares or other similar corporate change, or any distributions to stockholders of Common stock otner than regular cash dividends, (he Committee will make an equitable substitution or proportionate adjustment, m the number nr kind of shares of Common Stock or other securities issued or reserved lor issuance pursuant to the Plan and to any PSUs (including Dividend equivalent Share units) outstanding under this award for such corporate events

Other Equitable Adjustments: Except for lhe Qualitative Pertbrmance Factor, the Commmee may make adjustments (up or down) to the award as rt deems to be equitable, to maintain the intended economics of the award in light ol changed circumstances, which may include unusual or non-recurring events affecting the Firm (or the Performance Companies) or its financial statements in each case resulting from changes in accounting methods, practices or policies, changes m capital structure by reason of legal or regulatory requirements and such other changed circumstances, as the Committee mav deem appropriate

irrterpretation/AdministratioR. The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (1) interpret the Plan and the terms and conditions of (his Award Agreement, (11) determine the reason for termination of employment, (m) determine application of the post-employment obligations and cancellation and recovery provisions, (iv) decide all claims ansmg with respect to this award, and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Dnecioi of Human Resources or their respective delegates or nominees shall be binding on all parlies

Notwithstanding anything herein to the contrary, the determinations or the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements aie not required to he uniform. By way of clarification, the Committee. lhe Firm, the Director of Human Resources and their respective delegates and nominees shall beentitledtomake non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment, The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any lime and tor any reason, provided, however, that no such amendment shall materially adversely affect your r ignis under mis Award Agreement without your consent except to the extent lhat the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "no Ownership Rights." in either case, to the extent permitted by Section 409a of the Code, if 11 is applicable to you This Awaid Agreement may not be amended except m writing signed by the Director ol Human Resources of JPMorgan Chase

Severability: tl any portion of the Award Agreement is determined by the Firm lo be unenforceable in any jurisdiction, any court or arbitrator ot competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g.. as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law

Accelerated Distribution frxEthicsor Conflict Reasons ResultingFrom Employment by a Government Entity Upon ret ei;>t of satisfactory evidence that applicable United States federal, slate, local, foreign or supranational ethics or conflict of inteiesi laws or regulations require you to divest your interest in the award, the Firm may acceleiate the distnbution of all or part of your outstanding awaid. including Reinvested Dividend Equivalent Share units, effective on 01 before the required divestiture date and waive the Holding Requirement, provided lhat no accelerated distribution shall occur if the firm determines that such acceleration will violate Section 4 09A of the Code \

If you have voluntarily terminated your employment and have satisfied tlx? requirements of the section captioned "Government Office Requirements," acceleration shall apply (to extent required) to lhe percentage ol your outstanding award that would continue to vest under that section, in the case of a termination of employment where the award is outsiandmg as a result of the subsections entitled "Job Elimination" or "Full Career Eligibility," then acceleration shall apply, to the extent requued to the full outstanding award Subject to the two foregoing sections, the number ol shares of Common Slock to be received on acceleration shall be determined using tne methodology set forth under the section captioned "Death "

To the extent you have vested shares under this award subject to the Holding Requirement and become subject 10 divestiture requirement as forth herein, the Firm may waive lhe holding period to the extent required

Notwithstanding an accelerated distribution or wa'vcr of the Holding Requircmort pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the vesting period and shares had been distributed as scheduled as of each vesting date, including, but not limited to. repayment obligations set forth in the section captioned 'Remedies' and employment restrictions in the sections captioned "Protection-Based vesting and "Government Office" and the subsection "Full Career eligibility'

use of Personal Datai By accepting this award, you have acknowledged that the Firm may process your personal data (including sensitive personal data) for purposes, including but not limited to (1) determining your compensation. (11) payroll activities, including, but not limited to, tax withholding and regulatoly reporting, which tax and regulatory reporting and withholding may include, but is not limited to, the United States and its political subdivisions, (if not the United States) your work country and its political subdivisions (including 1 nun trie : lo which you travel on firm business) and your country or residence or nationality.du) registration or shares, dv) establishing brokerage account on your behalf, and (v) all other lawful purposes related to your employment and this award, and that the Firm may provide such data to third party vendors with whom it has contracted to provide such services and/or other bodies, including regulators, supervisory bodies, law enforcement and other government agencies vou are acknowledging and agreeing that your personal data will be transferred to and processed in countries and locations that do not have the same data privacy laws and statutory protection for personal data as your work country, country of residence, or country of nationality K your personal data is subject to data pnvacy laws or statutory protection for personal data and they so provide tor termination of lhe foregoing authorization, you may terminate the authorization al any time except with respect to tax and regulatory reporting and subiect always to the Fum's legal and regulatory obligations, in the event you terminate this authorization, your award will be cancelled

Governing Law This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of law principles

Choice of Forum By accepting this award under the Plan, you agree (and have agreed) that to the ex lent not otherwise subject lo arbitration under an arbitration agreement between you and (be Firm, any dispute arising directly or indirectly in connection with thisawardorthePlanshall be submitted toarbitration in actoi dance with the rules of the American Arbitration Association if so elected by the Fum in its sole discretion in the evcni such a dispute is not subject to arbitration loi any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any obiection to personal jurisdiction or to the laying of venue of such dispute and lurther agree not to commence any action arising out of or relating to this award or the Plan many other forum.

Waiver of Jury Tnal/CJasi Claims: Dy accepting (his award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (1) to waive the right to a jury trial and (u) lhal any judicial proceeding or arbitration claim will be brought on an individual basts, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member m a class action, collective action, or other representative or joint action

Litigation.- By accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement or any other Award Agreement where the Firm is the pievailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree lhai you arc not emitted to. and agree not 10 seek, advancement of attorney lees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm '

Nontransferability: Neither this award or any other outstanding awards of restricted stock units or ot performance based share units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hypothecated or suhjecl to any hen An award may be transferred following your death by will, the laws or descent or by a beneficiary designation on file with the Firm

Definitions "Annual PSUs" means ihe number ol PSUs determined by multiplying the Target Award Number lifter giving effect to any cancellation thereof, in whole or in part) by the Target Award fcrceniage corresponding to the Firm's Performance Ranking lor each applicable pcrfoimanrji year (bolh percentage and ranking, as set forth in the footnote to the Performance Table), provided that if the Firm Reported ROTCE for any completed calendar yeal in Hie Perlormance Period either equa's or exceeds 14% or is less than 6%. one hundred fifty percent or zero, respectively as (he case may be. shall be substituted fo' [hat years Target Award Percentage in calculating (he number of Annual PSUs lor (hat year For avoidance of doubt, any cancellation of this awaid (in whole or in part) during tlie Performance Period will reduce the Target Award Number

"Average Tangible Common Equity" means annual average common stockholders' equity less annual average goodwill and annual average identifiable intangible assets Annual averages ol the components of Average Tangible Common Equity will he calculated using quarterly balances as reported in publicly available financial disclosures, in the event that quarterly balances aie nut available, annual yeai end balances will be used This calculation is used solely for purposes of the Performance Ranking.

"Calculation Agent" ■■leans a tnud party e;uuy vot owned tu itin:ttil ed r>y Hie i-i n inn. ,i< ,ti .iic(>ufi:-"-r. (>■■ to: -'i'.!':-"',': Iirm retained !mn: tine lo time hy 1l»- nreclur of Human fi'.-sou: C es or hiv'lier clelee.il <http://clelee.il>'.■

"Cause" means a determinat'iin Dy me Firm mat vou' cirutiovneru leinlinai-Tj a:- .1 e-.ui: oi tour in -.1111.11 n- ui an-, y* rule 01 regulation (mi lurtmg rules ol wif-ie ga'.nioly bodies) related in me nun s business '■:■ m-.linmeiii or ((wuinin u! j feiony tin) commission of a fraudulent art (nr) violation of the JPMorgan Code nlCunducio: 'im- rin-pyliLirtiK ."i-.rciif.jct related tu your duties to (he Firm (other than unm.ncr.al am! inadvc'tem vioijlirms 01 miscundm:! <vi grossly ir.d-i:-i|u.iie performance ul tne duties associated with vour position 01 juh funrtior o[1] fjuiire kiiio* rc-jwui.::l-? n lect-ves 0' vw managei.or (vi) any act 01 failure to act lhat is injurious 1011* interests o' Hit Tint-or usrel.it <http://usrel.it> ons'im witr a cuiiym'" r.i>m 01 an employee

"Financial Services Company" means a business enterprise that employs vou m jiiv i.ip.tfliy (sue .m einplovje cnnirartor. consultant, advisor or sell-employed individual, whether paid 01 unpaid) and t'ii^.i^es in

commerci.il <http://commerci.il> or retail banking, including, bul .ml limited to. commercial instuiino::.:. and Derson.il <http://Derson.il> rusi ru-.wrJv and/or lending and processing services. originating and servicing mortgages, issui iij .ind servicing ncilu ' .vns payment servicing or piocessmg or merchant services.

insurance, including but not limned tu. guaranteeing again'.! loss, nam. d.viagr: iMness d-sab-uv o : acjih providing and issuing annuities, acting as principal, agent oi luofcer for pu'poM' (>' tn€ forgo: 1 is

financial, investment nr economic advisory services, including oul nut lnured to invesinn-ni banx irj services (yirh as advising on mergers or dispositions wide'writing, dealing in. or mating a market n secu'Uics nr n:her sin„n activities), brokerage services, investmenl management services, asset ma na gen vol services, and hedj;" iunds.

issuing, trading or selling instrumenls representing interests m pools ot assels 01 m denvanves i-siru::ie 'fs.

advising on. or investing in, private equity or real estate, ur

any similar activities that the Directur of Human Resoimes or nominee ifcuem-nes in his or iwr soie disc'-.'I'i'i [1] consiilute financial services.

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ra-d r.onineicc SnUiU'w". Auin r.nm.r r.eyal'v.- nn- ta- nn.- l.i.if iuss i-.-se v.- rcome

Finance and SlmVnl rommeicij! Banking	A.-.nuai negative ate n-ovis-on mri ncniiy including ica i ciijii;- otts
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Consumer Banking Business. CWM and Business Banting	Annual negative pie-p'ovsion nel income'
Corporate Functions (including Chief Investment Office)	Annual negative pre-iuovisuui net income' reported at the Firm level
Mortgage Banking	Annual negarrvc pre tax, jii-ioan loss reserve income'

'Pre-:n ore provision iimimr mews Revenue less fxrir'usei
'Pre :al pre-kwn lriss reserve income means Revenue Ipss (Fipeweiplus tie: Cna'pe olKi

"Firmwide Financial Threshold" means a cumulative return on tangible common enuitv for calendar yea-s .'017 2013 and 2019 of noi less lhan 15% Cumulative return on tangible common equity means 0! th-.- sum of tw hums reported nei income tor all three years, divided by (11) reported vear-und tangtbte eotiif y averaged "Firm Reported ROTCE" means the Fum's percentage return on tangible common equity lor each year in the t\-i lonnanct Pcriod (as calculated for use in its publicly available year-end financial disdosuies wilhouttak ng mm.si count any roundrig conventions used tor financial reporting pur poses)

"Government OfTice" means (1) a full-time position in an elected or appointed office in 'oca . stale, or federa. govei nmi'iit (including equivalent positions outside the LI S or in a supranational organization), no! reasonably anticipated :n he alul -career position, or (11) conducting a bona fide full-time campaign to-' such .in elective public ulke after formally Mm? for candidacy, where it is customary and reasonably necessary to campaign full-lime fur the office

"Line of Business" means a business unit of the Firm (or one or more business units designated below under [hedelinmrir. "Line of Business Financial Threshold" of ihe Corporate investment Bant) All Corporate Fund ion-, (mc.ludi'ig tne functions of the Chief investment Office) are considered a single Line 0! Business

"Line of Business Financial Threshold" means the financial threshold set forth below (or the following I ines of Business based on the Firm's management reporting system

"Hot-tor-Profit Organization" means an entity etempi from tai under sta(e law and under Settlor SOI (c)(3) of the Code Section 501(c)(i)nriiy includes entities organized and iipeiated exclusively iui itligiuui.dim liable, scientific, testing tor public safely, lit eiary or educational purposes, ortofoster national or international amateur sporti Loiiwt-Uiion or tor the prevention ol cmeliYlU ctMUftm or aninws ftot-lor-f'ioiit Organir.HHin shall a'.so mean entities outside the united States exempt horn local and national tai laws because they are organized and operated exclusively (or purposes identical lo those applicable tc Section bul (c)(3) organization

"Performance Companies" mean the following institutions which have business activities that overlap wilh a significant portion ot the Firms icvenue mix. Bank of Ameru.i Corporation Barclays PLC. Capital One Financial Coiporaiion. Citigroup Inc , Credit SmsseGroup AG. Deutsche Bank AG. Goldman Sar.hsGmup. Inc. HSBC Holdings Pi C. Morgan Stanley, wells rargo & Company, and UBS Groun Ad
If. during the Performance Period, one or more Performance Companies shall merge, engage in a spin-off 0: otherwise experience a material change in us revenue mix 01 business activiliirs or its existence or its primary businesses shall leimmate or cease due in rec.eiveiship, bankruptcy, sale, or otherwise, then the Committerl may eliminate such institution from die lis! of Perlormance Companies or make such other equitable adjustments, sutti as adding an acquirel or a new company to the list 0! Performance Companies, as it deems anpiopnaie, with any such changes having eflect for purposes ol all calculations hereunder on a prospective basis lrom the date the applicable change is made "Performance Period" mean;calendar years 2017. 2018 and ?019

"Performance Table" means the table used in the calculation of Annual PSUsforeachycar m the Performance Period as set forth below

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Pay by ROTCE scale

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If. after the calculation of the Performance Hanking, there is a he, the tie shall be disregarded tor purposes ol determining the Target Award Percentage For example, in the case ol a tie fur Hie fourth ranking between the Fum and a Performance Company, the Firm shall be treated as having satisfied that ranking, in ihe case of that same tie among Performance Companies, the fourth and fifth rankings will be decuvd to have been satisfied

Service" means the period of service as an employee set fori 11 in the Firm's applicable service-related

"Performance Ranking" means the ranking of the R01CL of (he Firm as compared to the ranking or the ROTCE of the Performance Companies as specified in the footnote to lhcPerfoi mance Table for each year in (he Performance Period

"ROTCE" means for the Firm and each of the Performance Companies a percentage derived bv. for eacn vear in the Performance Penod. dividing (i) annual earnings from continuing operations less dividends on preferred stock asset forth in published financial disclosures bv (11) the

Average Tangible Common Equity tor the year If. prior tu the end of the vesting period, the Firm or any Performance Company restates its published financial statements for any year in the Performance Period, ROTCE for that year shall be recalculated for the Firm or Performance Company with the Perfomunce Ranking adjusted, it necessary. This calculation is used solely for purposes of the Performance Ranking.

"Target Award Number" means the number of PSUs designated as such in the Award Agreement

"Target Award Percentage" means the applicable peiceniage specified in the footnote to tne Pcifoimani e Table for each year in the Performance Period
■ Full Career Eligibility.
"Government Office Renin re mouls" does not apply to you it you satisfy the subsection cannoned "--FulLCareer.eligibility" as of the date that you voluntarily terminate your employment with ihe Firm

Eligibility.
Cligioility fur continued vesting is conditioned on your providing the Firm:

' ■ At least 60 days' advance written notice uf your intention to resign to accept or pursue a Government Office (see section captioned "Definitions"), during which period you must perfo'm in a cooperative and professional manner service', requested by the Firm and not provide services for any other employer The Firm may elect to shorten ihis notice period at the Firm's discretion

Con fir mat ion. in a form satisfactory to the Firm, that vesting in tins award pursuant to this provision would not violate any applicable law, regulation or rule.

Documentation ma foi m satisfactory to the Firm that your resig nation is for tlie purpose ot accepting a Government Office or becoming a candidate tor a Government Office. (See section cannoned "Definitions') Portion or vour Award Subject to Continued vesting:

Sublet l lu the tondilions below, tne percentage ot this award that will continue to vest in accordance with this award's original schedule wil : he based on your years of continuous service completed with the Firm immediately preceding your termination dale, as follow;

50% if you have a(feasl 3 but less than 4 years of continuous service,

75% it you have at least 4 but less than 5 years of continuous service, or

100% if you have 5 or more years of continuous service

The portion of ibis award subject to continued vesting above is refer led to as the "CV Award" and the port ion not subject to continued vesting will be cancelled as of the date your employment terminates.

Conditions for Continued Vesting of Award:
You must remain in a non-electivc Government Office for two or more years afler youi employment with the Firm terminates to be eligible to receive ihcCV Award, provided lhat if your non-elective Government Of/ice is lor a jjeriod less rJia-i two years, you will be eligible to receive the CV Award if it has a vesting date during your period of Government Service, or

inthe case of lesignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ha l lot tor the election. (U you are not elected, see below for employment restrictions)

loi avoidance of doubt, the pei tor ma nee criteria and protection based vesting set forth ir. these terms and conditions corn 1 nut' lu apply ton CV Award

Satisfaction of Conditions.
If your service in a Government Office ends two years or more aflei your employment with the Pirm tern una res. or in tlie cay? ol resignation from the Firm 10 campaign fwa Goveilwieul Office, your name is on lfic primary or final public lullot tor the election and you in? ml elcclcfl, anyCV Awards then outstanding and any such awards thai would have then been outstanding but for an accelerated distribution ot shares (as described in (he subsection cannoned "-Accelerated Distribution lor Ethics or Conflict Reasons Resulting From Employment by a Govei nmenl Entity") wil' be subicit (or the remainder of the applicable vesting period lo the same terms and conditions ot this Award Agreement, including emp:oymen1 reslnciions during (he vesting penod. as if you had resigned Irom the Firm having met lhe requirements for Full Career eligibility.

Failure lo Satisfy Conditions.
If you do not satisfy the above "Conditions lor Continued Vesting ot Awards," any outstanding PSus under the CV Award will oe cancelled You also will be required (o repay the Fair Market Value ot the number of Shares (befuie tax and other withholdings) of Common Slock distributed 10 yu:: thai would have been outstanding as PSUs on the date you failed losansly the "Conditions for continued vesting of Award" hut for (heir arrelerated d-sKihuhon (as described m subsection cannoned. 'Accelerated Distribution for fitucs or Cunllict Seasons Resulting From Employment by a Government Entity") Fair Market value fui (ins purpose will be determined as the date thai lhe shares wvre distributed

Exhibit 12.1

JPUorgan Chase & to

Exhibit 12.2

JPMorgan Chase & Co

Computation of Ratio of Earnings to Fixed Charges And Preferred Stock Dividend Requirements

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Income Norn ifiniinuiiii> operations Oflore in
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Exhibit 21 JPMorgan Chase & Co

List of subsidiaries

While theie are a number of subsidiaries that are reauunltobe teporlpdlor various purposes to bank regulators. IHe foi limning is a list of jr-uo-'Ean Chase i Co."s signfiunl legal entity subsidianes as ol December Jl, 2016. *S defined Dy SEC rules. The list includes ihp parent company of significant subsidiaries even If the parent company did not meet the definition ol a sipiifcant subudiary Eicluded from the list are S'jbMdijneS thai, if cnnsidered in Ihe acgiej-atc. would not consti:uie a significant subsidiary under SEC rules as ol Oecember 31, 7016

Aho Included in the list are certain subsidiaries tha! have been designated ts mat owl legal entities lor resolution planning purposes under "w Dodd Frani act that did not meet the definition of a stfjnifian subsidiary under SEC rules.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on rorm S-3
(NO. 333-191602) (NO. 333-199966)

JPMorgan Chase tank. National Aiiocialon PaymcntKh. LLC Chase Mortgage Holdings. Inc JP Morgan iieaiury technalsgies Corporal nn 1P Morgan Interntional. inc. Bank On* international Holdings corporalwii I P Morgan international Finance Limited IP Morgan Oversees CipiialCnracratlori
J.P Morgan Whiielriari Inc. imorgai Securitiei Japan Co., Ltd I.P Morgan AC
Dearborn un chant Services, Inc.
Chase Parrnenech Solutions Payrnentech Safem Seraces. LLC
Chase Paymenicth Europe Limited J.P Morgan Ca>tal Holdings iirraird it Morgan Chase (UK) Holdings Limited J.P Morgan Chase mternaiionil HoUings I.P Uwiin securities PK
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IP Morgan Securities UC I P Morgan Lquily Holdings, inc. Chau Bank USA. National association Chase BankCaid Sei tic es, inc. Chase Card lunding lie Chase nuance Innl JPUorgan Ailet Minagrmert Holdings inc. J P Mel (an imeslrnent Manaeemenl lac
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of jPMorrjan Chase & Co or its affiliates of our report dated February 28. 2017 relating to the financial statements and the ellectiveness of internal control over financial reporting, which appears tn this rorm 10-K.

/s/ PricewalerhouseCoopers LLP New York. New York February 28, 201/

Exhibit 31.1

IPMorgan Chase & Co

Eihibit 31.2

jl'Morgan cnase S Co

CERTIFICATION

I. James Dimon. cernty thai 1. i have reviewed [his Annual Report on rorm io koI K'Moigan Chase & Co .

2 Based on my knowledge, this report docs not contain any untrue SIdlenient o! a material I act or onut tostaie a mjiL'iial 'act necessary to make the statements made, in light of the circumstances under which such statements were m joe nut misleading with respect to the period covered by this repori.

3 Dased on my knowledge the financial statements, and other financial information included in this report, t,n.-lv pr'sen .n al material respects the financial condition, results of operations and cash flows of the registrant as ul. <ind fm tne periods presented in this report.

4 The registrant's other certifying officer and I are responsible lor establishing and maintaining disclosure controls and procedures (as defined in Exchange Ad Rules 13a-15(e) and 15d- 15(e)) and internal control over (manual reporting (as defined m Exchange Act Rules 13a-15(f) and 15d- 15(f)) tor the

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures tu be designed under our supervision, to ensure lhat maienal uiloimation relating lo IMP ittgistiant. inducing its ron'ioliciatrc! subsidiaries, is made known to us by others within those entities, pariicuiailv during Ihe penud m wmrh Hus report is being prepared,

b) Designed such internal controls over financial repori mrj. or caused such internal controls over financial reporting io be designed under our supervision, to provide reasonable assurance regarding ihs reliability ol linanciai reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles

c) Evaluated (he effectiveness ul the regis!rani'* disclosure controls and procfdurt-s and presenit-u in lins repoit our conclusions about the effectiveness of (he disclosure controls and procedures, as ol iht end nl the penod coveieti hy this report based on such evaluation, and

d) Disclosed in 1 his report any change in the registrant's internal control over financial reporting that occurred during ine registrant's most recent fiscal quarter (the registrant's lourth quarter in the case of an annual report) that has materially allected, or is reasonably likely (0 materially aflect, the registrant's internal control over linanciai reporting, and

5 The registrant's other certifying officer and I have disclosed, based on our most recenl evaluadon of internal control over financial reporting, to (he regislrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function)

a) All significant deficiencies and material weaknesses in the design or operation ol internal control over fina-icial re [wrung which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information, and

b) Any fraud, whether or not material, that involves management or other employees who have a significant iolo m the registrant's internal control over financial reporting.

CERTIFICATION

t Uananne Lake cerntvihai I i have reviewed this Annual Report on Form 10-K of IPMorgan Chase & Co :

? Based on my knowledge, this repori does not contain any untrue statement ot a material fact or omit to state a material tact necessary to make ihe statements made, in light of the cirrums;ances under which such statements were made, not misleading with resnett to the period covered by this report,

3 Rased on my knowledge, the financial statements, and othei linanciai information included in this report, lai'ly present in all material respects the financial condition, results ol operations and cash flows ot the registrant as of. and for. the periods presented in this repori,

4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-J5(e)) and internal control over financial reporting (as delined in Exchange Act Rules 13a-15(f) and 15d- 15(f)) for (he registrant and have

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that maienal information relating tu the registrant, including its consolidated subsidiaries, is made known to us by others within [hose entities particularly dunng Ihe period in which this report is being prepared:

b) Designed such internal controls over financial reporting or caused such internal controls over financial reporting to tie designed under our supervision, to provide reasonable assurance regarding the reliability ol Financial reporting and Che preparation of financial statements for external purposes in accordance with generally accepted accounting principles,

ic) Evaluated Hie effectiveness of the registrant's disclusuiL' conlrois and piocedmes and presented in this report our conclusions about (he effectiveness of the disclosure controls and procedures, as of the end of the period covered by tins report based on such evaluation: and

(d) Disclosed in Ihis report any change in the registrant's internal control over financial reporting thai occurred during Ihe registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual repoit) lhat has materially affected, or is reasonably likely to materially aflect, the registrant's internal control over financial reporting, and

5 The icgistrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over linanciai reporting, lo the registrant's auditors and the audit commitlee of the registrant's board of directors (or persons performing the equivalent function)

a) All significant dehciencies and material weaknesses in (he design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information, and

b) Any fraud, whether or not material, that involves management or oiher employees who have a significant role m (he registrant's internal control over financial reporting.

Date February 28, 2017

/s/ James Dimon James Dimon
Chairman and Chief Executive Officer
Date. February 28, 2017

Isl Mananne Lake Marianne Lake
Exerulive Vice President and Chief Financial Officer

Exhibit 32

JPMorgan Chase & Co

CERTIFICATION PURSUANT TO 18 U.SX. SECTION 1350, AS ADOPTED
PURSUANT TO SECTION 906 OF THE 5ARDANES-0XLEY ACT OF 2002

in connection with the Annual Report of JPMorgan Chase & Co. on Form io-k for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereol (the "Report'), each of the undersigned officers of JPMorgan Chase & Co., certify, pursuant to 18 U.S.C. Section 1350. as adopted pursuant to Section 906 of the Sarbanes-Oxley Acl ol 2002. that.

1 The Report fully complies with Ihe requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and

2 The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of JPMorgan Chase A Co.

Date: February 28. 2017 By 1st James Dimon

James Dimon
Chairman and Chief Executive Officer

Date- February 28. 2017 By /s/ uananne Lake

Marianne Lake
Executive Vice President and Chief Financial Officer

Thtscerttfiation accompanies thisAnnualtieportandshatlnotbedeemed'fited'forpurposesofSectionlSolttieSecuritiesExchange Act of 1934. or otherwise subiect to the liability of that Section.

A signed original of this written statement required by Section 906 has been provided to. and wilt be retained by. JPUorgan Chase & Co and furnished to the Securities and exchange Commission or its staff upon request

CITY OF CHICAGO ECONOMIC DISCLOSURE
STATEMENT AND AFFIDAVIT

SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

1515 N. Halsted, LLC

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:
1. [x] the Applicant
OR
2. [ ] a legal entity currently holding, or anticipated to hold within six months after City action on
2. the contract, transaction or other undertaking to which this EDS pertains (referred to below as the
2. "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal
2. name:
OR
3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section 11(B)(1)) State the legal name of the entity in which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 211 N. Clinton sl, Suite 3S
Chicago, IL 60661

C. Telephone: 312-261-5777 Fax: Email: mdrew@strd8v.com

<mailto:mdrew@strd8v.com>

D. Name of contact person: j. Michael Drew

E. Federal Employer Identification No. (if you have one): _

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

Plat of subdivision for 1515 N. Halsted Street, Chicago, IL

G. Which City agency or department is requesting this EDS? cdot

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # n/a and Contract # n/a

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SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:
] Person v [x]
] Publicly registered business corporation [ ]
] Privately held business corporation [ ]
] Sole proprietorship [ ]
] General partnership (Is
] Limited partnership
]Trust [ ]

Limited liability company Limited liability partnership Joint venture
Not-for-profit corporation the not-for-profit corporation also a 501(c)(3))?
[ ] Yes [ ] No Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

Delaware

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[x] Yes [ ] No [ ] Organized in Illinois

B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name	Title
New City Chicago LLC	Member
John Bucksbaum Manager	
J. Michael Drew	Manager
Daniel A. Lukas Manager	

2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

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limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.

Name	Business Address	Percentage Interest in the Applicant
New City Chicago, LLC	211 N. Clinton, Suite 3S, Chicago, IL 60661	100%

SECTION IH - INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? [ ] Yes [x]No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation:

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?
[ ] Yes [ ] No

If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner (s) and describe the financial interests). ,

SECTION IV - DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

Name (indicate whether retained or anticipated to be retained)	**Business Address**	**Relationship to Disclosing Party (subcontractor, attorney,** lobbyist, etc.)	**Fees (indicate whether paid or estimated.) NOTE:** "hourly rate" or "t.b.d." is not an acceptable response.
Chris Leach, Akerman Attorney	71 S. Wacker Drive, 46th Floor, Chicago, IL 60606		Est. $7,500
V3 Companies of Illinois. Ltd.- Surveyor	7325 Janes Avenue. Ste. 100, Woodridge. IL 60517		Est. $4,500

(Add sheets if necessary)

[ ] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities.

SECTION V - CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

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3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section 11(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;

d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:
- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, ally Contractor or any Affiliated Entity (collectively "Agents").

Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating

elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below:

None

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of

preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient. None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

[ ] is [x] is not

a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

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If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ]'Yes [x]No

NOTE: If you checked "Yes" to Item D(l), proceed to Items D(2) and D(3). If you checked "No" to Item D(l), skip Items D(2) and D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name	Business Address	Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

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E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

x 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph A(l) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(l) and A(2) above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant? []Yes []No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[]Yes []No

If you checked "No" to question (1) or (2) above, please provide an explanation:

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www. cityofchicago.org/Ethics <http://cityofchicago.org/Ethics>, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

(312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGD3ILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

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CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

1515 N. Halsted, LLC

(Print^oryty^e eyfet leggi~name of Disclosing Party)

{Sign here)

J. Michael Drew

(Print or type name of person signing)

Manager
(Print or type title of person signing)

Signed and sworn to before me on (date) Ss^iBv^ggg, r^(ZO\r{,

at Cook County, Illinois (state).

Notary Public

Commission expires: A/J6jLlST~ 202

> • • ■ i ii tl* ^i^MifcafcAi '
' CHRISTINA M GLASS '
< Official Seal 1
l Notary Public-State of Illinois i
iMy Commission Expires Aug 26,2021 i

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [x] No

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [x] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [x] The Applicant is not publicly traded on any exchange.

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

New City Chicago LLC

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:

1. [ ] the Applicant

OR

2. [x] a legal entity currently holding, or anticipated to hold within six months after City action on the contract, transaction or other undertaking to which this EDS pertains (referred to below as the "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal name: 1515 N. Halsted, LLC

OR

3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section 11(B)(1)) State the legal name of the entity in which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 211 N. Clinton St., Suite 3S
Chicago, IL 60661

C. Telephone: (312) 261-5777 Fax: Email: mdrew@strdev.com

<mailto:mdrew@strdev.com>

D. Name of contact person: j. Michael Drew

E. Federal Employer Identification No. (if you have one). ;

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

Plat of subdivision for 1515 N. Halsted Street, Chicago, IL 60642

G. Which City agency or department is requesting this EDS? cdot

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # n/a and Contract # n/a

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SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

[ ] Person
[ ] Publicly registered business corporation
[ ] Privately held business corporation

[ ] Privately held business corporation
[ ] Sole proprietorship
[ ] General partnership
[ ] Limited partnership
[ ] Trust
[x] Limited liability company
[ ] Limited liability partnership
[ ] Joint venture
[ ] Not-for-profit corporation
(Is the not-for-profit corporation also a 501(c)(3))?
[ ] Yes .[ ]No [ ] Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

Delaware

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[x] Yes [ ] No [ ] Organized in Illinois

B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name	Title
New City JV LLC	Member
John Bucksbaum	Manager
J, Michael Drew	Manager
Daniel A. Lukas	Manager
New City Realty Company LLC	Member
Lee Schaffler	Vice-President

2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

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limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.

Name	Business Address	Percentage Interest in the Applicant
New City JV, LLC	211 N. Clinton, Suite 3S, Chicago, IL 60661	20%
New City Realty Company LLC c/o JP Morgan Investment Mgmt	270 Park Avenue, 7th Floor, New York, NY 10017	80%

SECTION 1TI - INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

i

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? [ ] Yes [x]No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation:

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party? []Yes []No

If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner (s) and describe the financial interest(s).

SECTION IV - DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTD2S

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant,' consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

Name (indicate whether retained or anticipated to be retained)	**Business Address**	**Relationship to Disclosing Party (subcontractor, attorney,** lobbyist, etc.)	**Fees (indicate whether paid or estimated.) NOTE:** "hourly rate" or "t.b.d." is not an acceptable response.

(Add sheets if necessary)

[x] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities. SECTION V - CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

the payment of any tax administered by the Illinois Department of Revenue.

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section 11(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;

d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:
- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section TV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any

to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications. i

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below:

None

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

[ ] is [x] is not

a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

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If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ] Yes [x] No

NOTE: If you checked "Yes" to Item D(l), proceed to Items D(2) and D(3). If you checked "No" to Item D(l), skip Items D(2) and.D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name	Business Address	Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

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E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

x 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph A(l) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(l) and A(2) above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?
[ ] Yes [ ] No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)

regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[ ]Yes [ ]No

If you checked "No" to question (1) or (2) above, please provide an explanation:

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SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics <http://www.cityofchicago.org/Ethics>, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGmiLITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

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CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

New City Chicago LLC

J. Michael Drew
(Print or type name of person signing)

Manager
(Print or type title of person signing)

Signed and sworn to before me on (date) £gPTfeMSglZ-.l8>2Cl'7

at Cook County, Illinois (state).

Notary Public

Commission expires:

,,i 1 ■ m<;
l CHRISTINA M GLASS
i official Seal
i Notary Public-State of Illinois i
, My Commission Expires Aug 26,2021 i

CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT
AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND
DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section ILB.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [x] No

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such

such person is connected, (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [x] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [x] The Applicant is not publicly traded on any exchange.

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

New City JV LLC

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:

1. [ ] the Applicant
   OR
2. [x] a legal entity currently holding, or anticipated to hold within six months after City action on
2. the contract, transaction or other undertaking to which this EDS pertains (referred to below as the
2. "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal
2. name: 1515 n. Halsted, llc
   OR

3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section 11(B)(1)) State the legal name of the entity in which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 211 n. Clinton St., Suite 3S

Chicago, IL 60661

C. Telephone: (312) 261-5777 Fax: Email: mdrew@strdev.com

<mailto:mdrew@strdev.com>

D. Name of contact person: J. Michael Drew

E. Federal Employer Identification No. (if you have one):

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

Plat of subdivision for 1515 N. Halsted Street, Chicago, IL 60642

G. Which City agency or department is requesting this EDS? cdot

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # n/a and Contract # n/a

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SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

] Person
] Publicly registered business corporation] Privately held business corporation] Sole proprietorship] General partnership] Limited partnership] Trust
[x] Limited liability company
[ ] Limited liability partnership
[ ] Joint venture
[ ] Not-for-profit corporation
(Is the not-for-profit corporation also a 501(c)(3))?
[ ] Yes [ ] No [ ] Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

2. Delaware

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[x] Yes [ ] No [ ] Organized in Illinois

B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the

trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name	Title
Halsted/Clyhrwn LLC	Momhar
Daniel A. Lukas	Manager
.1 MirihaRl Drew	Manager
Maxel New City LLC	Member
John RllC.khaiim	Manager

2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

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limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.

Name	Business Address	Percentage Interest in the Applicant
Halsted Clyboum LLC	211 N. Clinton, Suite 3S, Chicago, IL 60661	10%
Maxel New Citv LLC c/o John Bucksbaum	71 S. Wacker Drive. „ Suite 2130, Chicago, IL 60606	90%

SECTION III - INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? [ ] Yes [x] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation:

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?

[ ] Yes [ ] No

If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner (s) and describe the financial interest(s).

SECTION IV - DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

Name (indicate whether Business retained or anticipated Address to be retained)
Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)
Fees (indicate whether paid or estimated.) NOTE: "hourly rate" or "t.b.d." is not an acceptable response.

(Add sheets if necessary)

[x] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities. SECTION V - CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

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3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section 11(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;

d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:
- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section TV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

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Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below:

None

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient. None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

[ ] is [x] is not

a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

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If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ]Yes [x]No

NOTE: If you checked "Yes" to Item D(l), proceed to Items D(2) and D(3). If you checked "No" to Item D(l), skip Items D(2) and D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name	Business Address	Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

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E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

x 1- The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies.

The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph A(l) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(l) and A(2) above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?
[ ] Yes [ ] No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[ ]Yes [ ]No

If you checked "No" to question (1) or (2) above, please provide an explanation:

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics <http://www.cityofchicago.org/Ethics>, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

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CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

(Print or type name of person signing)

Manager
(Print or type title of person signing)

Signed and sworn to before me on (date)£*~PTEIr\AB>&V- 1^20) 7>

at Cook County, Illinois (state).

Notary Public

Commission expires: Adjust 2Ut ixtiA

CHRISTINA M GLASS
Official Seal
Notary Public-State of Illinois
MyCommission Expires Aug 26,2021

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the

Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B. 1 .a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [x]No

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTD7ICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [x] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [x] The Applicant is not publicly traded on any exchange.

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

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CITY OF CHICAGO ECONOMIC DISCLOSURE
STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

A. New City Realty Company. LLC

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:

1. [ ] the Applicant
   OR
2. jx] a legal entity holding a direct or indirect interest in the Applicant. State the legal name of the Applicant in which the Disclosing Party holds an interest: 1515 N- Halsted, LLC
   OR
3. [] a legal entity with a right of control (see Section II.B.l.) State the legal name of the entity in
3. which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 270 Park Avenue
New York. NY 10017

C. Telephone: (2121 648-2129 Fax: (2121648-2266 Email: lee.s.schafflCT@ipmorgan.com

<mailto:lee.s.schafflCT@ipmorgan.com>

D. Name of contact person: Lee Schaffler

E. Federal Employer Identification No. (if you have one):

F. Brief description of contract, transaction or other undertaking (referred to below as the "Matter") to which this EDS pertains. (Include project number and location of property, if applicable):
Equity partner in a mixed-use project with a total project cost of S270M

G. Which City agency or department is requesting this EDS? Department of Planning & Development

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # and Contract #

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SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY 1. Indicate the nature of the Disclosing Party:

] Person	|X]
] Publicly registered business corporation	[ ]
] Privately held business corporation	[ ]
] Sole proprietorship	[ ]
] General partnership	(Is

] Limited partnership
] Trust []

Limited liability company
Limited liability partnership
Joint venture
Not-for-profit corporation
the not-for-profit corporation also a 501(c)(3))?
[ ] Yes [ ] No
Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable: formed under the

laws of Delaware

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[ ] Yes pfl No] N/A

B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles of all executive officers and all directors of the entity. NOTE: For not-for-profit corporations, also list below all members, if any, which are legal entities. If there are no such members, write "no members." For trusts, estates or other similar entities, list below the legal titleholder(s).

If the entity is a general partnership, limited partnership, limited liability company, limited liability partnership or joint venture, list below the name and title of each general partner, managing member, manager or any other person or entity that controls the day-to-day management of the Disclosing Party. NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name Title
JPMorgan Chase Bank, N.A. Commingled Pension Trust Funds Managing Member

2. Please provide the following information concerning each person or entity having a direct or indirect beneficial interest (including ownership) in excess of 7.5% of the Disclosing Party. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture,

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interest of a member or manager in a limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None." NOTE: Pursuant to Section 2-154-030 of the Municipal Code of Chicago ("Municipal Code"), the City may require any such additional information from any applicant which is reasonably intended to achieve full disclosure.

Name	Business Address	Percentage Interest in the Disclosing Party

No person or entity owns more than 7.5%.

SECTION III - BUSINESS RELATIONSHIPS WITH CITY ELECTED OFFICIALS

Has the Disclosing Party had a "business relationship," as defined in Chapter 2-156 of the Municipal Code, with any City elected official in the 12 months before the date this EDS is signed?

[ ] Yes M No

If yes, please identify below the name(s) of such City elected official(s) and describe such relationship(s):

SECTION IV -- DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

, The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist, accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing. Party's regular payroll.

"Lobbyist" means any person or entity who undertakes to influence any legislative or administrative action on behalf of any person or entity other than: (1) a not-for-profit entity, on an unpaid basis, or (2) himself. "Lobbyist" also means any person or entity any part of whose duties as an employee of another includes undertaking to influence any legislative or administrative action.

If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

Name (indicate whether retained or anticipated to be retained)	Business Address	Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)	Fees (indicate whether paid or estimated.) NOTE: "hourly rate" or "t.b.d." is not an acceptable response.

(Add sheets if necessary) ■,

|X] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities. SECTION V -

CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under Municipal Code Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout'the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [ ] No |X] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. Pursuant to Municipal Code Chapter 1-23, Article I ("Article I")(which the Applicant should consult for defined terms (e.g., "doing business") and legal requirements), if the Disclosing Party submitting this EDS is the Applicant and is doing business with the City, then the Disclosing Party certifies as follows: (i) neither the Applicant nor any controlling person is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any sister agency; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If Article I applies to the Applicant, the permanent compliance timeframe in Article I supersedes some five-year compliance timeframes in certifications 2 and 3 below.

2. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II.B. 1. of this EDS: SEE ATTACHMENT A

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, within a five-year period preceding the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in clause B.2.b. of this Section V;

d. have not, within a five-year period preceding the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, within a five-year period preceding the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

3. The certifications in subparts 3, 4 and 5 concern: SEE ATTACHMENT A

- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity. Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity); with respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

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Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor nor any Agents have, during the five years before the date this EDS is signed, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the five years before the date of such Contractor's or

Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in a. or b. above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions of Municipal Code Section 2-92-610 (Living Wage Ordinance).

4. Neither the Disclosing Party, Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

5. Neither the Disclosing Party nor any Affiliated Entity is listed on any of the following lists maintained by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the Bureau of Industry and Security of the U.S. Department of Commerce or their successors: the Specially Designated Nationals List, the Denied Persons List, the Unverified List, the Entity List and the Debarred List.

6. The Disclosing Party understands and shall comply with the applicable requirements of Chapters 2-55 (Legislative Inspector General), 2-56 (Inspector General) and 2-156 (Governmental Ethics) of the Municipal Code.

7. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below.

SEE ATTACHMENT A

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If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

8. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the execution date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

9. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than S20 per recipient (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

1. [ ] is is not

a "financial institution" as defined in Section 2-32-455(b) of the Municipal Code.

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in Chapter 2-32 of the Municipal Code. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in Chapter 2-32 of the Municipal Code. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in Section 2-32-455(b) of the Municipal Code) is a predatory lender within the meaning of Chapter 2-32 of the Municipal Code, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING INTEREST IN CITY BUSINESS

Any words or terms that are defined in Chapter 2-156 of the Municipal Code have the same meanings when used in this Part D.

1. In accordance with Section 2-156-110 of the Municipal Code: Does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

□ Yes ■ WNo SEE ATTACHMENT A

NOTE: If you checked "Yes" to Item D.I., proceed to Items D.2. and D.3. If you checked "No" to Item D.I., proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D.I., provide the names and business addresses of the City officials or employees having such interest and identify the nature of such interest:

Name	Business Address	Nature of Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee. SEE ATTACHMENT A

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either 1. or 2. below. If the Disclosing Party checks 2., the Disclosing Party must disclose below or in an attachment to this EDS all information required by paragraph 2. Failure to

comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

X 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step I above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and

all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995 who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

Not Applicable

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995 have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in Paragraph A.l. above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

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3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A. I. and A.2. above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities".

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A.l. through A.4. above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations. N0t Applicable

Is the Disclosing Party the Applicant?

[ ] Yes [ ] No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[]Yes []No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No

3. Have ybu participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[ ] Yes [ ] No

If you checked "No" to question 1. or 2. above, please provide an explanation:

SECTION VII- ACKNOWLEDGMENTS, CONTRACT INCORPORATION, COMPLIANCE, PENALTIES, DISCLOSURE

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics and Campaign Financing Ordinances, Chapters 2-156 and 2-164 of the Municipal Code, impose certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of these ordinances and a training program is available on line at www.cityofchicago.org/Ethics <http://www.cityofchicago.org/Ethics>. and may also be obtained from the City's Board of Ethics, 740 N.

Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with the applicable ordinances.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other transactions with the City. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided on this EDS and any attachments to this EDS may be made available to the public on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to Article I of Chapter 1-23 of the Municipal Code (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by Chapter 1-23 and Section 2-154-020 of the Municipal Code.

The Disclosing Party represents and warrants that:

F. 1. The Disclosing Party is not delinquent in the payment of any tax administered by the Illinois Department of Revenue, nor are the Disclosing Party or its Affiliated Entities delinquent in paying any fine, fee, tax or other charge owed to the City. This includes, but is not limited to, all water charges, sewer charges, license fees, parking tickets, property taxes or sales taxes.

SEE ATTACHMENT A

F.2 If the Disclosing Party is the Applicant, the Disclosing Party and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed by the U.S. E.P.A. on the federal Excluded Parties List System ("EPLS") maintained by the U. S. General Services Administration.

F.3 If the Disclosing Party is the Applicant, the Disclosing Party will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in F.l. and F.2. above and will not, without the prior written consent of the City, use any such contractor/subcontractor that does not provide such certifications or that the Disclosing Party has reason to believe has not provided or cannot provide truthful certifications.

NOTE: If the Disclosing Party cannot certify as to any of the items in F.l., F.2. or F.3. above, an explanatory statement must be attached to this EDS.

CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS and Appendix A (if applicable) on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS and Appendix A (if applicable) are true, accurate and complete as of the date furnished to the City.

New City Realty Company, LLC

(Sign<3iere) Lee Schaffler
(Print or type name of person signing)

(Print or type name of Disposing Party) By:_

Authorized Officer
(Print or type title of person signing)

Signed and sworn to before me on (date) Ttecembttx 2 °f ~^-0^ at TWoAj^snA- County, ^hjuJ.^&jL. (state).

Notary Public.

Commission expires:

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LORRAINE PARADISO Notary Public • State ot New York NO. 01PA618579* Qualified In Naesau County My Commission Expires Apr 21;'2(?20:. ■ m m m m »»■■■■

CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5 percent. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under Municipal Code Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section H.B.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more titan a 7.5 percent ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

To the Authorized Representative's knowledge, information and belief after
[ ] Yes [X] No reasonable inquiry

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5 percent (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to Municipal Code Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to Section 2-92-416 of the Municipal Code?

[ ]Yes ft] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to Section 2-92-416 of the Municipal Code?

[ ]Yes [ ]No [X] Not Applicable

3. If yes to (1) or (2) above, please identify below the name of the person or legal entity identified as a building code scofflaw or problem landlord and the address of the building or buildings to which the pertinent code violations apply.

FULLING OUT THIS APPENDIX B CONSTITUTES ACKNOWLEDGMENT AND AGREEMENT THAT THIS APPENDIX B IS INCORPORATED BY REFERENCE INTO, AND MADE A PART OF, THE ASSOCIATED EDS, AND THAT THE REPRESENTATIONS MADE IN THIS APPENDIX B ARE SUBJECT TO THE CERTIFICATION MADE UNDER PENALTY OF PERJURY ON PAGE 12 OF THE ASSOCIATED EDS.

ATTACHMENT A TO
CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
FILED BY New City Realty Company, LLC (as a Disclosing Party holding an interest in the Applicant)

Responses contained in the corresponding EDS and this Attachment A are true, accurate and complete based on the Authorized Representative's knowledge, information and belief, upon due inquiry by relying on information provided by other employees of the Disclosing Party or its affiliates or subsidiaries. Some sections of the EDS are in the process of being updated. The Disclosing Party will provide the City of Chicago with an update to this Disclosure Statement if there are any material changes to the matters disclosed herein.

SECTION IV: DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

With respect to Section IV, the Authorized Representative certifies based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that the Disclosing Party has not retained a subcontractor, attorney, lobbyist, accountant, or consultant in connection with the Matter.

SECTION V: CERTIFICATIONS

B. FURTHER CERTIFICATIONS

B.2 The Authorized Representative certifies on behalf of the Disclosing Party, as to the statements contained in Section V, paragraph B.2 that based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that neither the Disclosing Party nor its affiliates are delinquent in paying any fine, fee, tax or other charge owed to the State of Illinois or the City of Chicago except for taxes that are being contested in good faith by appropriate legal proceeding and possible delinquencies in paying a fine, fee, tax or other charge related to (i) property mortgaged to the Disclosing Party or its affiliates,
ii) property owned by the Disclosing Party or its affiliates and leased to others,
iii) foreclosed property now owned by the Disclosing Party or its affiliates, (iv) property owned or held by the Disclosing Party or its affiliates as a fiduciary or nominee, and (v) fines, fees, taxes or other charges that are being contested in good faith by the Disclosing Party or its affiliates by appropriate legal proceeding. If there are any outstanding claims that the Disclosing Party is notified of that Disclosing Party was not aware of previously, Disclosing Party will immediately address them.

B.3(a-e) With respect to Section V, paragraph B.3 (a-e), the Authorized Representative certifies based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that such statements are accurate with respect to the executive officers and directors of the Disclosing Party. Based on the Authorized Representative's knowledge, information, and belief upon due inquiry, JPMorgan Chase & Co. and/or its subsidiaries (collectively, the "Firm") are defendants or putative defendants in numerous legal proceedings, including private civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintif f to class action lawsuits with potentially millions ofclass members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, secunties and consumer protection claims), some of which present novel legal theories. Based on current : knowledge, the Firm believes it has asserted meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings, intends to (defend itself vigorously in all such matters and does not believe that any pending legal proceeding would have a material effect on the Firm's performance of the services contemplated by the RFP. For further discussion, please refer to JPMorgan Chase & Co.'s publicly-filed disclosures; including its most recent Annual Report on Form 10-K and Quarterly Reports ,on Form 10-Q filed with the U.S. Securities and ExchangeCommission (available at: hrtp://investor.shareholder.com/ipmorganchase/sec.cmi). Reference is also made to a press release issued on May 20, 2015 concerning settlements related to foreign exchange activities (available at http ://investor.shareholder.com/ipmorgan/residential.cfm?ReleaseID=914105)

On May 20, 2015, JPMorgan Chase & Co. entered a plea of guilty to a single violation of federal antitrust law and is currently awaiting sentencing by the court. Additional information regarding the plea and resolutions of other investigations related to the Firm's foreign exchange activities is available via May 20, 2015 press release (available at <http://investor.shareholder.com/ipmorganchase/releasedetail.cfm?ReleaselD:=914>105).

B5 (a&d) The Authorized Representative certifies on behalf of the Disclosing Party the accuracy of the statements contained in Section V, paragraph B5 (a & d) only as to the Disclosing Party and its executive officers and directors. Based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, JPMorgan Chase & Co. and/or its subsidiaries (collectively, the "Firm") are defendants or putative defendants in numerous legal proceedings, including private civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions ofclass members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories. Based on current

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knowledge, the Finn believes it has asserted meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings, intends to defend itself vigorously in all suchmatters and does not believe that arty pending legal proceeding would have a material effect on the Firm's performance of the services contemplated by the RFP. For further discussion, please refer to JPMorgan Chase & Co.'s publicly-filed disclosures, including its most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q filed with the U.S. Securities and Exchange Commission (available at: <http://investor.shareholder.com/ipmorganchase/sec.cfm>). Reference is also made to a press release issued on May 20, 2015 concerning settlements related to foreign exchange activities (available at <http://investor.shareholder.com/ipmorganchase/releasedetail.cfm?ReleaselD=914>105). Furthermore, with respect to the Living Wage ordinance, the Disclosing Paity has not, during the five years before the execution date of this EDS, been determined to have violated the provisions of Municipal Code Section 2-92-610 (Living Wage Ordinance) as it relates to base wages.

B.5(b&c)&B.6

The Disclosing Party has not agreed or colluded with other bidders or prospective bidders as to this transaction, or been a party to any such agreement. Based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, the Disclosing Party has not been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise. Based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, the Disclosing Party has not made an admission of such conduct described in B.5 a. or b. above that is a matter of record, and has not been prosecuted for such conduct, except to the extent set forth in the summaries of material legal proceedings involving JPMorgan Chase & Co. or its subsidiaries within the last live years are referenced in JPMorgan Chase & Co.'s Form 10-K, Form 10-Q, and. any Form 8-K filing, all as filed with the Securities and Exchange Commission ("SEC") and all available through J.P. Morgan's Internet site <http://investor.shareholder.com/ipmorganchase/sec.cfm> or through the SEC's interne site fwww.sec.gov <http://fwww.sec.gov>) (the "SEC filings") and the public record of each matter identified in the SEC filings. The Authorized Representative certifies based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, none of the foregoing matters would have a material adverse effect on this transaction.

B. 7 The Authorized Representative, on behalf of the Disclosing Party, certifies as to the statement in Section V, paragraph B.7 that, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, neither the Disclosing Party, nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury or any successor lederal agency.

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429(61-41.1

B.ll Except as otherwise set forth in Attachment A, the Authorized Representative on behalf of the Disclosing Party does not make any certification whatsoever with respect to any Applicable Party other than the Disclosing Party. The Authorized Representative on behalf of the Disclosing Party also certifies that it has not engaged any sub-contractor with respect to this transaction.

B. 12 The Authorized Representative, on behalf of the Disclosing Party, certifies as to the statement in Section V, paragraph B.12 that, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, the following Bank employees were previously City of Chicago employees during the 12-month period preceding the execution date of this EDS: None.

B.13 The Authorized Representative certifies as to the statement in Section V, paragraph B.13 that, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, the following gifts were provided by employees of the Bank to the following: None.

D. INTEREST IN CITY BUSINESS

D. 1 & D.4 As to the disclosures set forth in Section V, paragraphs D. 1 & D.4, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, on behalf of the Disclosing Party, to the extent the Disclosing Party has any control the Authorized Representative certifies that no official or employee of the City of Chicago has a financial interest in his or her own name or in the name of any other person in this transaction.

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42916141;!

CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

Maxel New City LLC

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is: .1. [ ]
the Applicant OR
2. [x] a legal entity currently holding, or anticipated to hold within six months after City action on
2. the contract transaction or other undertaking to which this EDS pertains (referred to below as the
2. "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal

2. name: 1515 N. Halsted. LLC

OR

3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section E(B)(I)) State the legal name of the entity in which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 71 s Wacker Drive, Suite 2130

Chicago, IL 60606

C. Telephone: (312)260 1131 Fax: Email. ioit@bucksbaumrp.com

<mailto:ioit@bucksbaumrp.com>

D. Name of contact person: Jason pit

E. Federal Employer Identification No. (if you have one):

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable)'

Plat of subdivision for 1515 N. Halsted Street, Chicago, IL 60642

G. Which City agency or department is requesting this EDS? cdot

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # and Contract # ;

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DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY I. Indicate the nature of the Disclosing Party:

[ ] Person	[x]
[ ] Publicly registered business corporation	[ ]
[ ] Privately held business corporation	[ ]
[ ] Sole proprietorship	[ ]
[ ] General partnership	(Is
[ ] Limited partnership	
[ ] Trust	[ ]

Limited liability company Limited liability partnership Joint venture
Not-for-profit corporation the not-for-profit corporation also a 501(c)(3))?
[ ] Yes [ ] No Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

Delaware ,

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[xJYes []No [] Organized in Illinois

B. DF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name	Title
John Bucksbaum	■ Manager

2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

Page 2 of 14

limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE. Each legal entity listed below may be required to submit an EDS on its own behalf.

Name	Business Address	Percentage Interest in the Applicant
Bucksbaum Retail Properties, LLC	71 S. Wacker Dr, Suite 2130, Chicago, IL 60606	100%

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? [ ] Yes [x] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected offictal(s) and describe such income or compensation:

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?
[ ] Yes [ ] No

If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner (s) and describe the financial interest(s).

SECTION IV - DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure

Page 3 of 14

Name (indicate whether Business retained or anticipated Address to be retained)
Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)
Fees (indicate whether paid or estimated.) NOTE: "hourly rate" or "t.b.d." is

not an acceptable response.

(Add sheets if necessary)

[x] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities.

SECTION V -- CERTIFICATIONS

A COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue

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3 The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section 11(B)(1) of this EDS

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction, a violation of federal or state antitrust statutes; fraud, embezzlement; theft; forgery; bribery; falsification or destruction of records, making false statements, or receiving stolen property ;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) abo ve;

d. have not. during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default, and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:

- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties"),
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly, controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment, common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations), or (a)(6)(Mimmum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-ngging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8 [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency", and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below:

None

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none") As to any gift listed below, please also list the name of the City recipient.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

[ ] is [x] is not

a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

[f the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ] Yes [x] No

NOTE: If you checked "Yes" to Item D(I), proceed to Items D(2) and D(3). If you checked "No" to Item D (1), skip Items D(2) and D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale[1]?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest.

Name	Business Address	Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

x I. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records'

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VTI. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities i. registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay- any person or entity listed in paragraph A(1) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(I) and A(2) above.

4 The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant'7
[ ] Yes [ ] No

If "Yes," answer the three questions below

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2)
[ ] Yes [ ] No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?

[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause[9]

[ ] Yes [ ] No

If you checked "No" to question (I) or (2) above, please provide an explanation:

FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that.

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.citvofchicago.orij/Ethics <http://www.citvofchicago.orij/Ethics>, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this E DS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article 1 (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

Page 11 of 14

CERTIFICATION

Under penalty of perjury, the person signing below (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

Maxel New City LLC
(Print or type exact legal name of Disclosing Party)

John Bucksbaum
(Print or type name of person signing)

Manager
(Print or type title of person signing)

Signed and sworn to before me on (date)

Page 12 of 14

CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT n/a

APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (I) all executive officers of the Disclosing Party listed in Section II.B.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership, all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [ ] No

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship

CTTY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT
AND AFFIDAVIT
APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [ ] The Applicant is not publicly traded on any exchange.

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

CITY OF CHICAGO ECONOMIC DISCLOSURE
STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

Bucksbaum Retail Properties LLC

Check ONE of the following three boxes

Indicate whether the Disclosing Party submitting this EDS is:
1. [ ] the Applicant
OR
2. [x] a legal entity currently holding, or anticipated to hold within six months after City action on the contract, transaction or other undertaking to which this EDS pertains (referred to below as the "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal name[1] 1515 N Halsted. LLC
OR
3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section II(B)(I)) State the legal name of the entity in which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 71 s Wacker Drive, Suite 2130
Chicago, IL 60606

C. Telephone: oi2)260 1131 Fax: Email: joit@bucksbaumrp com

D. Name of contact person: jason Pit

E. Federal Employer Identification No. (if you have one):

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

Plat of subdivision for 1515 N. Halsted Street. Chicago. IL 60642

G. Which City agency or department is requesting this EDS? cdot

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # n/a and Contract # n/a

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SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A NATURE OF THE DISCLOSING PARTY

I. Indicate the nature of the Disclosing Party:

] Person
] Publicly registered business corporation
] Privately held business corporation
] Sole proprietorship
] General partnership
] Limited partnership
] Trust

[x] Limited liability company
[ ] Limited liability partnership
[ ] Joint venture
[ ] Not-for-profit corporation
(Is the not-for-profit corporation also a 501 (c)(3))?
[ ] Yes [ ] No
[ ] Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

Delaware

3. For legal entities not organized in the State of Illinois. Has the organization registered to do business in the State of Illinois as a foreign entity?

[x] Yes [ ] No [ ] Organized in Illinois

B. LF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE Each legal entity listed below must submit an EDS on its own behalf

Name Title John Bucksbaum Manager

2 Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE. Each legal entity listed below may be required to submit an EDS on its own behalf.

Name	Business Address	Percentage Interest in the Applicant
John Bucksbaum Revocable Trust	71 S. Wacker Dr., Suite 2130 Chicago, IL 60606	_1%
JB Trust	300 North Dakota Avenue, Suite 102, Sioux Falls, SD 57104	99.9%

SECTION III INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CTTY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? [ ] Yes [x] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation.

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?
[ ] Yes [ ] No

If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner(s) and describe the financial interest(s).

SECTION IV -- DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

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Name (indicate whether retained or anticipated to be retained)	Business Address	Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)	Fees (indicate whether paid or estimated.) NOTE: "hourly rate" or "t.b.d." is not an acceptable response.

(Add sheets if necessary)

[x] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities. SECTION V - CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

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3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with, obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction, a violation of federal or state antitrust statutes, fraud; embezzlement; theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property,

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;

d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:

- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties"),

Section IV, "Disclosure of Subcontractors and Other Retained Parties");

- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership, identity of interests among family members, shared facilities and equipment, common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any A ffiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

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Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise, or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (I) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4;.or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE. If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes tn this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below:

None

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" doe's not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient.

Name of the City recipient:
None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

[ ] is [x] is not

a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

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If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Parry certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ] Yes [X] No

NOTE: If you checked "Yes" to Item D(l), proceed to Items D(2) and D(3). If you checked "No" to Item D(1), skip Items D(2) and D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or

employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name Business Address Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

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E CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

x I. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (I) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph A(l) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(l) and A(2) above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?
[ ]Yes [ ]No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations[9] (See 41 CFR Part 60-2.)
[ ]Yes [ ]No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause[9]
[ ] Yes [ ] No

If you checked "No" to question (1) or (2) above, please provide an explanation.

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FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions The full text of this ordinance and a training program is available on line at www.citvofchicago.org/Ethics <http://www.citvofchicago.org/Ethics>. and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

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CERTIFICATION

Under penalty of perjury, the person signing below (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

Bucksbaum Retail Properties, LLC
(Print or type exact legal name of Disclosing Party)

John Bucksbaum
(Print or type name of person signing)

Manager
(Print or type title of person signing)

Signed and sworn to before me on (date)

Signed and sworn to before me on (date)
(state).

Notary Public

County, Illinois

Gommission expires:

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section n.B.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership, all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party, and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [ ] No

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT N/A
APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [ ] The Applicant is not publicly traded on any exchange.

3 If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

CITY OF CHICAGO ECONOMIC DISCLOSURE
STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable:

JB Trust

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:

1. [ ] the Applicant

OR

2. [x] a legal entity currently holding, or anticipated to hold within six months after City action on the contract, transaction or other undertaking to which this EDS pertains (referred to below as the "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal name: 1515 N Halsted, LLC

OR

3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section 11(B)(1)) State

the legal name of the entity in which the Disclosing Party holds a right of control:

B. Business address of the Disclosing Party: 300 North Dakota Ave.. Suite 202

Sioux Falls, SD 57104

C. Telephone: (515) 965-7721 Fax: (515) 965-7716 Email: emg@mboffice.com

<mailto:emg@mboffice.com>

D. Name of contact person: E. Michael Greaves

E. Federal Employer Identification No. (if you have one):

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

Plat of subdivision for 1515 N. Halsted Street, Chicago, IL 60642

G. Which City agency or department is requesting this EDS? cdot

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # n/a and Contract # n/a

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SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

[ ] Person	[ ] Limited liability company
[ ] Publicly registered business corporation	[ ] Limited liability partnership
[ ] Privately held business corporation	[ ] Joint venture
[ ] Sole proprietorship	[ ] Not-for-profit corporation
[ ] General partnership	(Is the not-for-profit corporation also a 501(c)(3))?
[ ] Limited partnership	[ ] Yes [ ] No
[x | Trust	[ ] Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[ ] Yes [ ] No [ ] Organized in Illinois

B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member,, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name	Title
General Trust Company	Trustee

2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.

Name '	Business Address	Percentage Interest in the Applicant
John Bucksbaum	71 S. Wacker Drive Suite 2130 Chicago, IL 60606	100%

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? [ ] Yes [x] No

12-month period preceding the date of this EDS? [ ] Yes [x] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation:

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?
[ ] Yes [ ] No

If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner(s) and describe the financial interest(s).

SECTION IV - DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

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Name (indicate whether retained or anticipated to be retained)	Business Address	Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)	Fees (indicate whether paid or estimated.) NOTE: "hourly rate" or "t.b.d." is not an acceptable response.

(Add sheets if necessary)

[x] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities. SECTION V - CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section 11(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;

d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:

- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

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Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below:

None

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").

None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

[ ] is [x] is not

a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

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If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ] Yes [x] No

NOTE: If you checked "Yes" to Item D(l), proceed to Items D(2) and D(3). If you checked "No" to Item D(l), skip Items D(2) and D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name	Business Address	Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

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E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

x 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph A(l) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which

there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(l) and A(2) above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?

[ ] Yes [ ] No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[ ] Yes [ ] No

If you checked "No" to question (1) or (2) above, please provide an explanation:

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SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics <http://www.cityofchicago.org/Ethics>. and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

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CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

JB Trust
(Print or type exact legal name of Disclosing Party)
(Sign here)
By: General Trust Cgpapany, Trustee By-
Marshall E. Eisenberg
(Print or type name of person signing)

President
(Print or type title of person signing)

Signed and sworn to before me on (date) ^^"^v-i^ J%) at CfrC4~

County, III j n(state).

^ Notary Pubft

OFFICIAL SEAL TERESA JPERICH
NOTARY PUBLIC - STATE OF ILLINOIS MY
COMMISSION EXPIRES:02/22/19

Commission expires: ^ ' 'r 1

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND
DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the .Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [ ] No

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

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CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT n/a

APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [ ] The Applicant is not publicly traded on any exchange.

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

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CITY OF CHICAGO ECONOMIC DISCLOSURE
STATEMENT AND AFFIDAVIT

SECTION I - GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include d/b/a/ if applicable: General Trust Company

Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:
1. [ ] the Applicant
   OR
2. [ ] a legal entity currently holding, or anticipated to hold within six months after City action on
2. the contract, transaction or other undertaking to which this EDS pertains (referred to below as the
2. "Matter"), a direct or indirect interest in excess of 7.5% in the Applicant. State the Applicant's legal
2. name:
   OR
3. (x] a legal entity with a direct or indirect right of control of the Applicant (see Section 11(B)(1)) State the legal name of the entity in which the Disclosing Party holds a right of control:
JB Trust

B. Business address of the Disclosing Party: 300 North Dakota Ave, Suite 202
Sioux Falls, SD 57104

C. Telephone: (515) 965-7721 Fax: (515) 965-7716 Email: emg@mbofTice.com

<mailto:emg@mbofTice.com>

D. Name of contact person: E. Michael Greaves

E. Federal Employer Identification No. (if you have one)

F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

Plat of subdivision for 1515 N. Halsted Street, Chicago, IL 60642

G. Which City agency or department is requesting this EDS? CDOT

If the. Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification # JN/A and Contract #

Ver.20l7-I Page I of 14

SECTION II - DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

[ ] Person	[ ] Limited liability company
[ ] Publicly registered business corporation	[ ] Limited liability partnership
[X] Privately held business corporation	[ ] Joint venture
[ ] Sole proprietorship	[ ] Not-for-profit corporation
[ ] General partnership	(Is the not-for-profit corporation also a 501(c)(3))?
[ ] Limited partnership	[ ] Yes [ ] No
[ ] Trust	[ ] Other (please specify)

2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable: South Dakota

3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?

[ ] Yes [X] No [ ] Organized in Illinois

B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

Name	Title
Marshall E. Eisenberg	President and Director
E. Michael Greaves	Vice President, Cashier and Director
Richard B. Dennett	Vice President
Earl N. Melamed	Secretary and Director
Cheryl Hoover	Asst. Secretary
Patricia Gessman	Asst. Cashier and Director

2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a

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limited liability company, or interest of a beneficiary of a trust, estate or other similar entity, If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.

Name Business Address Percentage Interest in the Applicant

Marshall E. Eisenberg 2 N. LaSalle St, Suite 1700, Chicago IL 60602 18.6%

No other person or entity owns-more than 7.5%

SECTION in - INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the

12-month period preceding the date of this EDS? [ ] Yes |X] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City

elected official during the 12-month period following the date of this EDS? [ ] Yes |X] No

If "yes" to either of the above, please identify below the name(s) of such City elected officials) and

describe such income or compensation:

N/A

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable

inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in

Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?

[ ] Yes |X] No

If "yes," please identify below the name(s) of such City elected officials) and/or spouse(s)/domestic partner(s) and describe the financial interest(s). N/A

SECTION IV - DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

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Name (indicate whether retained or anticipated to be retained)	**Business Address**	**Relationship to Disclosing Party (subcontractor, attorney,** lobbyist, etc.)	**Fees (indicate whether paid or estimated.) NOTE:** "hourly rate" or "t.b.d." is not an acceptable response.

(Add sheets if necessary)

IX] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities. SECTION V - CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?

[ ] Yes [x] No [ ] No person directly or indirectly owns 10% or more of the Disclosing Party.

If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

[ ] Yes [ ] No

B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section 11(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;

b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;

d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).

5. Certifications (5), (6) and (7) concern:
- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or .entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity; ,
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any

Affiliated Entity (collectively "Agents").

Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;

b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or

c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or

d. violated tlie provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS 5/33E-4; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be

hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such

contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below: N/A

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none"). None

13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient. None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)

   [ ] is [X] is not

   a "financial institution" as defined in MCC Section 2-32-455(b).

2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:

"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

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If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary): N/A

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

[ ] Yes |X] No

NOTE: If you checked "Yes" to Item D(l), proceed to Items D(2) and D(3). If you checked "No" to Item D(l), skip Items D(2) and D(3) and proceed to Part E.

2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?

[ ] Yes [ ] No

3. If you checked "Yes" to Item D(l), provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name Business Address Nature of Financial Interest

4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee.

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

X 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records:

SECTION VI - CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE. If the Matter is federally funded, complete this Section VI. If the Matter is not federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by N/A the City and proceeds of debt obligations of the City are not federal funding.

A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary):

(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)

2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph A(l) above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee

of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.

3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs A(l) and A(2) above.

4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.

5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs A(l) through A(4) above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?
[ ] Yes [ ] No

If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No

2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required

3. Have you participated in any previous contracts or subcontracts subject to the equal

opportunity clause?
[ ] Yes [ ] No

If you checked "No" to question (1) or (2) above, please provide an explanation:

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics <http://www.cityofchicago.org/Ethics>, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

CERTIFICATION

Under penalty of" perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and Appendices A and B (if applicable), on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and Appendices A and B (if applicable), are true, accurate and complete as of the date furnished to the City.

General Trust Company
(Print or type exact legal name of Disclosing Party)

Marshall E. Eisenberg (Print or type name of person signing)

President
(Print or type title of person signing)

Commission expires:

Signed and sworn to before me on (date)SiyrfiswJus 3<S. ^-rV f- ,

at Cook County, Illinois (state).

CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX A

FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.l.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

[ ] Yes [ ] No

If yes, please identify below (I) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
APPENDIX B

BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No

2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

[ ] Yes [ ] No [ ] The Applicant is not publicly traded on any exchange.

3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

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