

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
March 31, 2017

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)

13-2624428
(I.R.S. employer
identification no.)

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

10017
(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.

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).

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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer (Do not check if a smaller reporting company)	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 No

Number of shares of common stock outstanding as of March 31, 2017: 3,552,803,801

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JPMorgan Chase & Co.
Consolidated financial highlights

(unaudited) As of or for the period ended, (in millions, except share, ratio, headcount data and where otherwise noted)	1Q17	4Q16	3Q16	2Q16	1Q16
Selected income statement data					
Total net revenue	\$ 24,675	\$ 23,376	\$ 24,673	\$ 24,380	\$ 23,239
Total noninterest expense	15,019	13,833	14,463	13,638	13,837
Pre-provision profit	9,656	9,543	10,210	10,742	9,402
Provision for credit losses	1,315	864	1,271	1,402	1,824
Income before income tax expense	8,341	8,679	8,939	9,340	7,578
Income tax expense	1,893	1,952	2,653	3,140	2,058
Net income	\$ 6,448	\$ 6,727	\$ 6,286	\$ 6,200	\$ 5,520
Earnings per share data					
Net income: Basic	\$ 1.66	\$ 1.73	\$ 1.60	\$ 1.56	\$ 1.36
Diluted	1.65	1.71	1.58	1.55	1.35
Average shares: Basic ^(a)	3,601.7	3,611.3	3,637.7	3,675.5	3,710.6
Diluted ^(a)	3,630.4	3,646.6	3,669.8	3,706.2	3,737.6
Market and per common share data					
Market capitalization	312,078	307,295	238,277	224,449	216,547
Common shares at period-end	3,552.8	3,561.2	3,578.3	3,612.0	3,656.7
Share price: ^(b)					
High	\$ 93.98	\$ 87.39	\$ 67.90	\$ 66.20	\$ 64.13
Low	83.03	66.10	58.76	57.05	52.50
Close	87.84	86.29	66.59	62.14	59.22
Book value per share	64.68	64.06	63.79	62.67	61.28
Tangible book value per share ("TBVPS") ^(c)	52.04	51.44	51.23	50.21	48.96
Cash dividends declared per share	0.50	0.48	0.48	0.48	0.44
Selected ratios and metrics					
Return on common equity ("ROE")	11%	11%	10%	10%	9%
Return on tangible common equity ("ROTCE") ^(c)	13	14	13	13	12
Return on assets	1.03	1.06	1.01	1.02	0.93
Overhead ratio	61	59	59	56	60
Loans-to-deposits ratio	63	65	65	66	64
High quality liquid assets ("HQLA") (in billions) ^(d)	\$ 528	\$ 524	\$ 539	\$ 516	\$ 505
Common equity Tier 1 ("CET1") capital ratio ^(e)	12.5%	12.4%	12.0%	12.0%	11.9%
Tier 1 capital ratio ^(e)	14.3	14.1	13.6	13.6	13.5
Total capital ratio ^(e)	15.6	15.5	15.1	15.2	15.1
Tier 1 leverage ratio ^(e)	8.4	8.4	8.5	8.5	8.6
Selected balance sheet data (period-end)					
Trading assets	\$ 402,513	\$ 372,130	\$ 374,837	\$ 380,793	\$ 366,153
Securities	281,850	289,059	272,401	278,610	285,323
Loans	895,974	894,765	888,054	872,804	847,313
Core loans	812,119	806,152	795,077	775,813	746,196
Average core loans	805,382	799,698	779,383	760,721	737,297
Total assets	2,546,290	2,490,972	2,521,029	2,466,096	2,423,808
Deposits	1,422,999	1,375,179	1,376,138	1,330,958	1,321,816
Long-term debt ^(f)	289,492	295,245	309,418	295,627	290,754
Common stockholders' equity	229,795	228,122	228,263	226,355	224,089
Total stockholders' equity	255,863	254,190	254,331	252,423	250,157
Headcount	246,345	243,355	242,315	240,046	237,420
Credit quality metrics					
Allowance for credit losses	\$ 14,490	\$ 14,854	\$ 15,304	\$ 15,187	\$ 15,008
Allowance for loan losses to total retained loans	1.52%	1.55%	1.61%	1.64%	1.66%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans ^(g)	1.31	1.34	1.37	1.40	1.40
Nonperforming assets	\$ 6,826	\$ 7,535	\$ 7,779	\$ 7,757	\$ 8,023
Net charge-offs ^(h)	1,654	1,280	1,121	1,181	1,110
Net charge-off rate ^(h)	0.76%	0.58%	0.51%	0.56%	0.53%

(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.

(b) Share prices are from the New York Stock Exchange.

(c) 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 13-15.

(d) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio. For additional information, see HQLA on page 57.

(e) Ratios presented are calculated under the Basel III Transitional capital rules and for the capital ratios represent the Collins Floor. See Capital Risk Management on pages 32-39 for additional information on Basel III.

(f) Included unsecured long-term debt of \$212.0 billion, \$212.6 billion, \$226.8 billion, \$220.6 billion and \$216.1 billion at March 31, 2017, December 31, 2016, September 30, 2016, June 30, 2016 and March 31, 2016, respectively.

(g) 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 13-15. For further discussion, see Allowance for credit losses on pages 53-55.

(h) For the first quarter of 2017, excluding net charge-offs of \$467 million related to the student loan portfolio write-down, the net charge-off rate would have been 0.54%. For additional information, refer to CCB segment results on page 17.

INTRODUCTION

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

This Form 10-Q should be read in conjunction with JPMorgan Chase's Annual Report on Form 10-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 151-159 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 72 of this Form 10-Q and Part I, Item 1A, Risk Factors, on pages 8-21 of JPMorgan 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 \$2.5 trillion in assets and \$255.9 billion in stockholders' equity as of March 31, 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 plc, 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 of JPMorgan Chase's 2016 Annual Report.

EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Form 10-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

(unaudited) As of or for the period ended, (in millions, except per share data and ratios)	Three months ended March 31,		
	2017	2016	Change
Selected income statement data			
Total net revenue	\$ 24,675	\$ 23,239	6%
Total noninterest expense	15,019	13,837	9
Pre-provision profit	9,656	9,402	3
Provision for credit losses	1,315	1,824	(28)
Net income	6,448	5,520	17
Diluted earnings per share	\$ 1.65	\$ 1.35	22
Selected ratios and metrics			
Return on common equity	11%	9%	
Return on tangible common equity	13	12	
Book value per share	\$ 64.68	\$ 61.28	6
Tangible book value per share	52.04	48.96	6
Capital ratios^(a)			
CET1	12.5%	11.9%	
Tier 1 capital	14.3	13.5	
Total capital	15.6	15.1	

(a) Ratios presented are calculated under the Basel III Transitional capital rules and represent the Collins Floor. See Capital Risk Management on pages 32-39 for additional information on Basel III.

Firmwide overview

- JPMorgan Chase reported strong results in the first quarter of 2017 with net income of \$6.4 billion, or \$1.65 per share, on net revenue of \$24.7 billion. The Firm reported ROE of 11% and ROTCE of 13%.
- Net income increased 17% compared with the prior year reflecting higher net revenue, lower provision for credit losses and lower income tax expense, largely offset by higher noninterest expense.
- Total net revenue increased 6% compared with the prior year. Net interest income was \$12.1 billion, up 6%, primarily driven by loan growth and the net impact of higher interest rates. Noninterest revenue was \$12.6 billion, up 6%, primarily driven by higher CIB Markets and Banking revenue, largely offset by higher Card new account origination costs and lower mortgage servicing rights (“MSRs”) risk management results.
- Noninterest expense was \$15.0 billion, up 9%, compared with the prior year, primarily driven by higher compensation and legal expense, auto lease depreciation, and FDIC-related expense, as well as a contribution to the Firm’s Foundation.

- Income tax expense decreased compared with the prior year predominantly due to a higher tax benefit related to the appreciation of the Firm’s stock price upon vesting of employee stock-awards above their original grant price.
- The provision for credit losses was \$1.3 billion, a decrease from \$1.8 billion in the prior year, due to a benefit in the wholesale provision, partially offset by an increase in the consumer provision. The wholesale benefit reflected a net reduction in the allowance for credit losses of \$93 million in the current quarter, primarily driven by Oil & Gas, versus an increase of \$713 million in the prior year quarter. The increase in the consumer provision included a write-down of the student loan portfolio to its estimated fair value as a result of transferring the portfolio to held-for-sale, and higher Card net charge-offs, which were in line with expectations. Refer to CCB segment results on page 17 for additional information regarding the student loan transfer.
- The total allowance for credit losses was \$14.5 billion at March 31, 2017, and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1.31%, compared with 1.40% in the prior year. The Firm’s nonperforming assets totaled \$6.8 billion at March 31, 2017, a decrease from the prior-quarter and prior-year levels of \$7.5 billion and \$8.0 billion, respectively.
- Firmwide average core loans increased 9% compared with the prior year.
- The Firm added to its capital, ending the first quarter of 2017 with a TBVPS of \$52.04, up 6% compared with the prior year.
- The Firm’s estimated Basel III Fully Phased-In CET1 capital was \$184 billion, and the Advanced and Standardized CET1 ratios were 12.4%.
- The Fully Phased-In supplementary leverage ratio (“SLR”) was 6.6% for the Firm and 6.7% for JPMorgan Chase Bank, N.A. at March 31, 2017.

ROTCE, TBVPS and core loans are considered key financial performance measures. Each of the Fully Phased-In capital and leverage measures is considered a key regulatory capital measure. 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 13-15, and Capital Risk Management on pages 32-39.

Business highlights

- **CCB:** average core loans and average deposits each increased 11% from the prior year; active mobile customers of 27.3 million, an increase of 14% from the prior year; credit card sales volume increased 15%, and merchant processing volume increased 11%, from the prior year.
- **CIB** maintained its #1 ranking for Global Investment Banking fees with 8.5% wallet share for the three months ended March 31, 2017.

- **CB** had record revenue and record net income. Average loans were also a record, increasing 12% from the prior year.
- **AWM** had record average loans, increasing 7% compared with the prior year; record average deposit balances, increasing 5%; and record assets under management of \$1.8 trillion, increasing 10%. 77% of AWM's mutual fund assets under management ranked in the 1st or 2nd quartiles over the past 5 years.

For a detailed discussion of results by line of business, refer to the Business Segment Results on pages 16-30.

JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided credit and raised capital of \$561 billion for wholesale and consumer clients during the first three months of 2017:

- \$69 billion of credit for consumers
- \$5 billion of credit for U.S. small businesses
- \$175 billion of credit for corporations
- \$296 billion of capital raised for corporate clients and non-U.S. government entities
- \$16 billion of credit and capital raised for nonprofit and U.S. government 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 of JPMorgan 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 72 of this Form 10-Q and Risk Factors on pages 8-21 of JPMorgan 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.

Management's current expectations:

- Second quarter 2017 net interest income is expected to be approximately \$400 million higher than in the first quarter of 2017. Management also expects 2017 net interest income to increase approximately \$4.5 billion compared with the prior year, based upon market implied interest rates at quarter-end.
- 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 trends 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 student loan portfolio write-down in the first quarter. In Card, management expects the portfolio average net charge-off rate to increase in 2017, but remain below 3.00% for the year, reflecting continued loan growth and the seasoning of newer vintages, with quarterly net-charge offs reflecting normal seasonal trends.

CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three months ended March 31, 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, see pages 67-69 of this Form 10-Q and pages 132-134 of JPMorgan Chase's 2016 Annual Report.

Revenue

(in millions)	Three months ended March 31,		
	2017	2016	Change
Investment banking fees	\$ 1,817	\$ 1,333	36%
Principal transactions	3,582	2,679	34
Lending- and deposit-related fees	1,448	1,403	3
Asset management, administration and commissions	3,677	3,624	1
Securities gains/(losses)	(3)	51	NM
Mortgage fees and related income	406	667	(39)
Card income	914	1,301	(30)
Other income ^(a)	770	801	(4)
Noninterest revenue	12,611	11,859	6
Net interest income	12,064	11,380	6
Total net revenue	\$ 24,675	\$ 23,239	6%

(a) Included operating lease income of \$824 million and \$615 million for the three months ended March 31, 2017 and 2016, respectively.

Total net revenue increased by 6% on higher net interest income and noninterest revenue. Growth in noninterest revenue was driven by CIB Markets and Banking activities, partially offset by higher Card new account origination costs and lower Mortgage Banking MSR risk management results and servicing revenue.

Investment banking fees increased due to higher debt and equity underwriting fees reflecting strong underlying issuance activity and market share gains, partially offset by lower advisory fees. For additional information, see CIB segment results on pages 21-25 and Note 5.

Principal transactions revenue increased reflecting broad-based strength across products in CIB's Fixed Income Markets business, including:

- improvement in Rates reflecting increased market activity particularly in Europe in advance of upcoming elections and in reaction to central bank actions
- higher revenue from Securitized Products and Credit driven by strong demand and spread tightening.

For additional information, see CIB and Corporate segment results on pages 21-25 and page 30, respectively, and Note 5.

Mortgage fees and related income decreased driven by lower MSR risk management results and lower servicing revenue due to lower average third-party loans serviced. For further information on mortgage fees and related income, see CCB segment results on pages 17-20 and Note 15.

Card income decreased predominantly driven by higher new account origination costs, partially offset by higher other card-related fees, largely annual fees. For further information, see CCB segment results on pages 17-20.

Other income decreased primarily reflecting the absence of a gain in the prior year on the disposal of an asset in AWM and due to lower other income in CIB, partially offset by higher operating lease income reflecting growth in auto operating lease volume in CCB. For further information on other income, see Note 5.

Net interest income increased primarily driven by loan growth across the businesses and the net impact of higher rates. 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 2.33%, an increase of 3 basis points from the prior year.

For additional information on asset management, administration and commissions income, see the segment discussions of CIB and AWM on pages 21-25 and pages 28-29, respectively, and Note 5; on lending- and deposit-related fees, see the segment results for CCB on pages 17-20, CIB on pages 21-25, and CB on pages 26-27 and Note 5; and on securities gains, see the Corporate segment discussion on page 30.

Provision for credit losses

	Three months ended March 31,		
	2017	2016	Change
Consumer, excluding credit card	\$ 442	\$ 221	100%
Credit card	993	830	20
Total consumer	1,435	1,051	37
Wholesale	(120)	773	NM
Total provision for credit losses	\$ 1,315	\$ 1,824	(28)%

The **provision for credit losses** decreased as a result of:

- a net reduction in the wholesale allowance for credit losses of \$93 million versus additions to the allowance of \$713 million in the prior year. The net reduction in the current quarter was primarily driven by Oil & Gas; partially offset by
- an increase in the consumer provision of \$218 million related to the transfer of the student loan portfolio to held-for-sale, and higher net charge-offs of \$163 million in the credit card portfolio, which were in line with expectations.

For a more detailed discussion of the student loan transfer, see CCB segment results on pages 17-20; the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 17-20, CIB on pages 21-25, CB on pages 26-27, the Allowance for Credit Losses on pages 53-55 and Note 13.

Noninterest expense

	Three months ended March 31,		
	2017	2016	Change
Compensation expense	\$ 8,201	\$ 7,660	7%
Noncompensation expense:			
Occupancy	961	883	9
Technology, communications and equipment	1,828	1,618	13
Professional and outside services	1,543	1,548	–
Marketing	713	703	1
Other expense ^{(a)(b)}	1,773	1,425	24
Total noncompensation expense	6,818	6,177	10
Total noninterest expense	\$ 15,019	\$ 13,837	9%

(a) Included Firmwide legal expense of \$218 million and \$(46) million for the three months ended March 31, 2017 and 2016, respectively.

(b) Included FDIC-related expense of \$381 million and \$269 million for the three months ended March 31, 2017 and 2016, respectively.

Compensation expense increased predominantly driven by:

- higher performance-based compensation expense and
- investments in headcount, including bankers and support staff in certain businesses.

Noncompensation expense increased as a result of:

- higher net legal expense
- higher depreciation expense from growth in auto operating lease volume in CCB
- higher FDIC-related expense, and
- a contribution to the Firm's Foundation.

For a further discussion of legal expense, see Note 22.

Income tax expense

	Three months ended March 31,		
	2017	2016	Change
Income before income tax expense	\$ 8,341	\$ 7,578	10%
Income tax expense	1,893	2,058	(8)
Effective tax rate	22.7%	27.2%	

The **effective tax rate** decreased predominantly due to a higher tax benefit related to the appreciation of the Firm's stock price upon vesting of employee stock-based awards above their original grant price, and the continued utilization of certain deferred tax assets.

CONSOLIDATED BALANCE SHEETS ANALYSIS

Consolidated balance sheets overview

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

Selected Consolidated balance sheets data

(in millions)	Mar 31, 2017	Dec 31, 2016	Change
Assets			
Cash and due from banks	\$ 20,484	\$ 23,873	(14)%
Deposits with banks	439,911	365,762	20
Federal funds sold and securities purchased under resale agreements	190,566	229,967	(17)
Securities borrowed	92,309	96,409	(4)
Trading assets:			
Debt and equity instruments	346,450	308,052	12
Derivative receivables	56,063	64,078	(13)
Securities	281,850	289,059	(2)
Loans	895,974	894,765	–
Allowance for loan losses	(13,413)	(13,776)	(3)
Loans, net of allowance for loan losses	882,561	880,989	–
Accrued interest and accounts receivable	60,038	52,330	15
Premises and equipment	14,227	14,131	1
Goodwill	47,292	47,288	–
Mortgage servicing rights	6,079	6,096	–
Other intangible assets	847	862	(2)
Other assets	107,613	112,076	(4)
Total assets	\$ 2,546,290	\$ 2,490,972	2 %

Cash and due from banks and deposits with banks

increased primarily driven by deposit growth and a shift in the deployment of excess cash from 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 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 57-61.

Trading assets and liabilities—debt and equity instruments

increased predominantly related to client-driven market-making activities in CIB, reflecting :

- an increase in CIB Markets trading assets driven by higher debt and equity instruments to facilitate client demand on increased market activity
- an increase in trading liabilities driven by higher levels of client-driven short positions in debt instruments.

For additional information, refer to Note 2.

Trading assets and liabilities—derivative receivables and payables

decreased predominantly related to client-driven market-making activities in CIB Markets, reflecting a decrease in derivative receivables and payables driven by maturities and market movements, which reduced foreign exchange and interest rate receivables, as well as foreign exchange payables.

For additional information, refer to Derivative contracts on pages 51-52, and Notes 2 and 4.

Loans were flat and reflected the following:

- higher wholesale loans predominantly driven by originations of commercial real estate loans and commercial and industrial loans
- lower consumer loans reflecting the seasonal decline in credit card balances, lower home equity loans and a write-down of the student loan portfolio which was transferred to held-for-sale, largely offset by originations of high-quality prime mortgages in CCB and AWM.

The **allowance for loan losses** decreased reflecting the utilization of the allowance for loan losses in connection with the transfer of the student loan portfolio to held-for-sale, and the net reduction in the wholesale allowance primarily driven by Oil & Gas.

For detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 40-55, and Notes 2, 3, 12 and 13.

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

For information on Securities, see Notes 2 and 10; and MSRs, see Note 15.

Selected Consolidated balance sheets data (continued)

(in millions)	Mar 31, 2017	Dec 31, 2016	Change
Liabilities			
Deposits	\$ 1,422,999	\$ 1,375,179	3%
Federal funds purchased and securities loaned or sold under repurchase agreements	183,316	165,666	11
Commercial paper	14,908	11,738	27
Other borrowed funds	24,342	22,705	7
Trading liabilities:			
Debt and equity instruments	90,913	87,428	4
Derivative payables	44,575	49,231	(9)
Accounts payable and other liabilities	183,200	190,543	(4)
Beneficial interests issued by consolidated variable interest entities ("VIEs")	36,682	39,047	(6)
Long-term debt	289,492	295,245	(2)
Total liabilities	2,290,427	2,236,782	2
Stockholders' equity	255,863	254,190	1
Total liabilities and stockholders' equity	\$ 2,546,290	\$ 2,490,972	2%

Deposits increased due to the following:

- higher consumer deposits reflecting the continuation of strong growth from existing and new customers, low attrition rates and seasonal factors
- higher wholesale deposits driven by growth in client activity in CIB's Securities Services business, partially offset by the impact of seasonality in CB and lower balances in AWM driven by market improvement, which resulted in net inflows to investment products.

For more information on deposits, refer to the Liquidity Risk Management discussion on pages 57-61; and Notes 2 and 16.

Federal funds purchased and securities loaned or sold under repurchase agreements increased predominantly due to higher financing of client-driven market-making activities in CIB. For additional information on the Firm's Liquidity Risk Management, see pages 57-61.

Commercial paper increased reflecting higher issuance in the wholesale markets consistent with Treasury and Chief Investment Office's ("CIO") short-term funding plans. For additional information, see Liquidity Risk Management on pages 57-61.

Accounts payable and other liabilities decreased due to lower payables to merchants in CCB.

For information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 57-61; on changes in stockholders' equity, see page 76, and on the Firm's capital actions, see Capital actions on page 38.

CONSOLIDATED CASH FLOWS ANALYSIS

Consolidated cash flows overview

The following is a discussion of cash flow activities during the three months ended March 31, 2017 and 2016.

(in millions)	Three months ended March 31,	
	2017	2016
Net cash provided by/(used in)		
Operating activities	\$ (20,036)	\$ (21,383)
Investing activities	(27,037)	(34,581)
Financing activities	43,605	53,584
Effect of exchange rate changes on cash	79	102
Net increase/(decrease) in cash and due from banks	\$ (3,389)	\$ (2,278)

Operating activities

Cash used in operating activities for the period ending March 31, 2017 resulted from:

Client-driven market-making activities in CIB

- an increase in trading assets-debt and equity instruments to facilitate client demand on increased market activity
- an increase in accrued interest and accounts receivable due to higher client receivables
- lower derivative receivables, partially offset by lower derivative payables reflecting the impact of maturities and market movements

Other operating activities

- a decrease in accounts payable and other liabilities due to lower payables to merchants in CCB
- higher net originations and purchases of loans held-for-sale predominantly in CIB and CB.

Cash used in operating activities in 2016 from client-driven market-making activities in CIB resulted from:

- an increase in accrued interest and accounts receivable due to higher unsettled securities transactions, and higher brokerage customer receivables
- an increase in trading assets, which was largely offset by cash provided by 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
- net loan originations of commercial real estate and commercial and industrial loans in the wholesale portfolio, which were largely offset by lower consumer loans reflecting the seasonal decline in credit card balances

Partially offsetting these cash outflows were net proceeds from paydowns, maturities, sales and purchases of investment securities and a decrease in 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 deposits with banks, which were placed with various central banks, predominantly Federal Reserve Banks
- net originations of consumer and wholesale 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.

Financing activities

Cash provided by financing activities in 2017 resulted from:

- higher consumer deposits reflecting the continuation of strong growth from existing and new customers, low attrition rates and seasonal factors
- higher wholesale deposits reflecting growth in client activity
- an increase in securities loaned or sold under repurchase agreements predominantly due to higher financing of client-driven market-making activities in CIB.

Cash provided by financing activities in 2016 resulted from:

- an increase in consumer deposits reflecting seasonal factors and continued growth from new and existing customers
- an increase in wholesale deposits reflecting growth in client activity.

For both periods, cash was used for net payments of long-term borrowings, 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 9-10, Capital Risk Management on pages 32-39, and Liquidity Risk Management on pages 57-61 of this Form 10-Q, and pages 110-115 of JPMorgan Chase's 2016 Annual Report.

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 20 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 14 of this Form 10-Q, and Note 1 and Note 16 of JPMorgan 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-1”, “A-1” and “F1” 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 March 31, 2017, and December 31, 2016, was \$3.1 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 \$7.0 billion and \$7.4 billion at March 31, 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 14.

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 14 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 or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm’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 51 and Note 20. For a discussion of liabilities associated with loan sales and securitization-related indemnifications, see Note 20.

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 73-77. 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 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.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 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

related to tax-exempt items is recorded within income tax expense/(benefit). 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 16-30.

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 40-55.

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.

(in millions, except ratios)	Three months ended March 31,					
	2017			2016		
	Reported results	Fully taxable-equivalent adjustments ^(a)	Managed basis	Reported results	Fully taxable-equivalent adjustments ^(a)	Managed basis
Other income	\$ 770	\$ 582	\$ 1,352	\$ 801	\$ 551	\$ 1,352
Total noninterest revenue	12,611	582	13,193	11,859	551	12,410
Net interest income	12,064	329	12,393	11,380	293	11,673
Total net revenue	24,675	911	25,586	23,239	844	24,083
Pre-provision profit	9,656	911	10,567	9,402	844	10,246
Income before income tax expense	8,341	911	9,252	7,578	844	8,422
Income tax expense	\$ 1,893	\$ 911	\$ 2,804	\$ 2,058	\$ 844	\$ 2,902
Overhead ratio	61%	NM	59%	60%	NM	57%

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

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. CIB's Markets businesses represent 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 CIB's Markets businesses ("CIB Markets").

Management believes this exclusion 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.

Three months ended March 31, (in millions, except rates)	2017	2016	Change
Net interest income - managed basis ^{(a)(b)}	\$ 12,393	\$ 11,673	6%
Less: CIB Markets net interest income ^(c)	1,364	1,499	(9)
Net interest income excluding CIB Markets^(a)	\$ 11,029	\$ 10,174	8
Average interest-earning assets	\$ 2,160,912	\$ 2,043,983	6
Less: Average CIB Markets interest-earning assets ^(c)	522,759	515,786	1
Average interest-earning assets excluding CIB Markets	\$ 1,638,153	\$ 1,528,197	7%
Net interest yield on average interest-earning assets - managed basis	2.33%	2.30%	
Net interest yield on average CIB Markets interest-earning assets ^(c)	1.06	1.17	
Net interest yield on average interest-earning assets excluding CIB Markets	2.73%	2.68%	

- (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 13.
- (c) The prior period amounts were revised to align with CIB's Markets businesses. For further information on CIB's Markets businesses, see page 24.

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.

(in millions, except per share and ratio data)	Period-end		Average	
	Mar 31, 2017	Dec 31, 2016	Three months ended March 31,	
			2017	2016
Common stockholders' equity	\$ 229,795	\$ 228,122	\$ 227,703	\$ 221,561
Less: Goodwill	47,292	47,288	47,293	47,332
Less: Certain identifiable intangible assets	847	862	853	985
Add: Deferred tax liabilities ^(a)	3,225	3,230	3,228	3,177
Tangible common equity	\$ 184,881	\$ 183,202	\$ 182,785	\$ 176,421
Return on tangible common equity	NA	NA	13%	12%
Tangible book value per share	\$ 52.04	\$ 51.44	NA	NA

(a) Represents deferred 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 32-39.

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 are utilized by the Firm and its investors and analysts in assessing actual growth in the loan portfolio.

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 13-15.

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 37.

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 Fully Phased-In RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the 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-In RWA because the Firm believes it to be the best proxy for economic risk. 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.

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 months ended March 31, 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.

Three months ended March 31, (in millions)	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
	2017	2016	Change	2017	2016	Change	2017	2016	Change
Consumer & Community Banking	\$ 10,970	\$ 11,117	(1)%	\$ 6,395	\$ 6,088	5%	\$ 4,575	\$ 5,029	(9)%
Corporate & Investment Bank	9,536	8,135	17	5,121	4,808	7	4,415	3,327	33
Commercial Banking	2,018	1,803	12	825	713	16	1,193	1,090	9
Asset & Wealth Management	3,087	2,972	4	2,580	2,075	24	507	897	(43)
Corporate	(25)	56	NM	98	153	(36)	(123)	(97)	(27)
Total	\$ 25,586	\$ 24,083	6%	\$ 15,019	\$ 13,837	9%	\$ 10,567	\$ 10,246	3%

Three months ended March 31, (in millions, except ratios)	Provision for credit losses			Net income/(loss)			Return on equity	
	2017	2016	Change	2017	2016	Change	2017	2016
Consumer & Community Banking	\$ 1,430	\$ 1,050	36%	\$ 1,988	\$ 2,490	(20)%	15%	19%
Corporate & Investment Bank	(96)	459	NM	3,241	1,979	64	18	11
Commercial Banking	(37)	304	NM	799	496	61	15	11
Asset & Wealth Management	18	13	38	385	587	(34)	16	25
Corporate	-	(2)	NM	35	(32)	NM	NM	NM
Total	\$ 1,315	\$ 1,824	(28)%	\$ 6,448	\$ 5,520	17%	11%	9%

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 157.

Selected income statement data

(in millions, except ratios)	Three months ended March 31,		
	2017	2016	Change
Revenue			
Lending- and deposit-related fees	\$ 812	\$ 769	6%
Asset management, administration and commissions	539	530	2
Mortgage fees and related income	406	667	(39)
Card income	817	1,191	(31)
All other income	743	649	14
Noninterest revenue	3,317	3,806	(13)
Net interest income	7,653	7,311	5
Total net revenue	10,970	11,117	(1)
Provision for credit losses	1,430	1,050	36
Noninterest expense			
Compensation expense	2,533	2,382	6
Noncompensation expense ^(a)	3,862	3,706	4
Total noninterest expense	6,395	6,088	5
Income before income tax expense	3,145	3,979	(21)
Income tax expense	1,157	1,489	(22)
Net income	\$ 1,988	\$ 2,490	(20)
Revenue by line of business			
Consumer & Business Banking	\$ 4,906	\$ 4,550	8
Mortgage Banking	1,529	1,876	(18)
Card, Commerce Solutions & Auto	4,535	4,691	(3)
Mortgage fees and related income details:			
Net production revenue	141	162	(13)
Net mortgage servicing revenue ^(b)	265	505	(48)
Mortgage fees and related income	\$ 406	\$ 667	(39)%
Financial ratios			
Return on equity	15%	19%	
Overhead ratio	58	55	

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 \$599 million and \$432 million for the three months ended March 31, 2017 and 2016, respectively.
- (b) Included MSR risk management of \$(52) million and \$129 million for the three months ended March 31, 2017 and 2016, respectively.

Quarterly results

Net income was \$2.0 billion, a decrease of 20%, driven by higher provision for credit losses, higher noninterest expense and lower net revenue.

Net revenue was \$11.0 billion, a decrease of 1%. Net interest income was \$7.7 billion, up 5%, driven by higher deposit balances and higher loan balances, partially offset by loan spread compression. Noninterest revenue was \$3.3 billion, down 13%, driven by higher new account origination costs in Card, lower MSR risk management results and lower servicing revenue, partially offset by higher auto lease volume and higher card- and deposit-related fees. See Note 15 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was \$6.4 billion, an increase of 5%, driven by higher auto lease depreciation and business growth.

The provision for credit losses was \$1.4 billion, an increase of 36%, driven by the transfer of the student loan portfolio to held-for-sale, and higher net charge-offs in the credit card portfolio, which were in line with expectations.

During the first quarter of 2017, the Firm transferred 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 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. The transfer impacted certain loan and credit-related metrics, including net charge-offs, net charge-off rates and the allowance for loan losses.

Subsequent to March 31, 2017, the Firm entered into an agreement to sell the student loan portfolio. The carrying value of the student loan portfolio was \$6.3 billion as of March 31, 2017. The sale is scheduled to close over the next several months and is not expected to have a material impact on the Firm’s Consolidated Financial Statements.

Selected metrics

(in millions, except headcount)	As of or for the three months ended March 31,		
	2017	2016	Change
Selected balance sheet data (period-end)			
Total assets	\$ 524,770	\$ 505,071	4%
Loans:			
Consumer & Business Banking	24,386	22,889	7
Home equity	48,234	56,627	(15)
Residential mortgage and other	185,114	172,413	7
Mortgage Banking	233,348	229,040	2
Card	135,016	126,090	7
Auto	65,568	62,937	4
Student	6,253	7,890	(21)
Total loans	464,571	448,846	4
Core loans	381,393	348,802	9
Deposits	646,962	582,026	11
Equity	51,000	51,000	–
Selected balance sheet data (average)			
Total assets	\$ 532,098	\$ 503,231	6
Loans:			
Consumer & Business Banking	24,359	22,775	7
Home equity	49,278	57,717	(15)
Residential mortgage and other	183,756	168,694	9
Mortgage Banking	233,034	226,411	3
Card	137,211	127,299	8
Auto	65,315	61,252	7
Student	6,916	8,034	(14)
Total loans	466,835	445,771	5
Core loans	381,016	343,705	11
Deposits	622,915	562,284	11
Equity	51,000	51,000	–
Headcount	133,590	129,925	3%

Selected metrics

(in millions, except ratio data)	As of or for the three months ended March 31,		
	2017	2016	Change
Credit data and quality statistics			
Nonaccrual loans ^{(a)(b)}	\$ 4,442	\$ 5,117	(13)%
Net charge-offs ^(c)			
Consumer & Business Banking	57	56	2
Home equity	47	59	(20)
Residential mortgage and other	3	1	200
Mortgage Banking	50	60	(17)
Card	993	830	20
Auto	81	67	21
Student ^(d)	498	37	NM
Total net charge-offs^(d)	\$ 1,679	\$ 1,050	60
Net charge-off rate ^(c)			
Consumer & Business Banking	0.95%	0.99%	
Home equity ^(e)	0.52	0.55	
Residential mortgage and other ^(e)	0.01	–	
Mortgage Banking ^(e)	0.10	0.13	
Card ^(f)	2.94	2.62	
Auto	0.50	0.44	
Student	NM	1.85	
Total net charge-off rate^{(d)(e)}	1.58	1.04	
30+ day delinquency rate			
Mortgage Banking ^{(g)(h)}	1.08%	1.41%	
Card ⁽ⁱ⁾	1.66	1.45	
Auto	0.93	0.94	
Student ⁽ⁱ⁾	–	1.41	
90+ day delinquency rate – Card ⁽ⁱ⁾	0.87	0.75	
Allowance for loan losses			
Consumer & Business Banking	\$ 753	\$ 703	7
Mortgage Banking, excluding PCI loans	1,328	1,588	(16)
Mortgage Banking – PCI loans ^(c)	2,287	2,695	(15)
Card	4,034	3,434	17
Auto	474	399	19
Student	–	299	(100)
Total allowance for loan losses^(c)	\$ 8,876	\$ 9,118	(3)%

- (a) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
- (b) At March 31, 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 \$4.5 billion and \$5.7 billion, respectively; and (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program (“FFELP”) of \$234 million and \$269 million, respectively. These amounts have been excluded based upon the government guarantee.
- (c) Net charge-offs and the net charge-off rates for the three months ended March 31, 2017 and 2016, excluded \$24 million and \$47 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 54.

- (d) For the first quarter of 2017, excluding net charge-offs of \$467 million related to the student loan portfolio write-down, the total net charge-off rate would have been 1.14%.
- (e) Excludes the impact of PCI loans. For the three months ended March 31, 2017 and 2016, the net charge-off rates including the impact of PCI loans were as follows: (1) home equity of 0.39% and 0.41%, respectively; (2) residential mortgage and other of 0.01% and -%, respectively; (3) Mortgage Banking of 0.09% and 0.11%, respectively; and (4) total CCB of 1.46% and 0.95%, respectively.
- (f) Average credit card loans included loans held-for-sale of \$99 million and \$72 million for the three months ended March 31, 2017 and 2016, respectively. These amounts are excluded when calculating the net charge-off rate.
- (g) At March 31, 2017 and 2016, excluded mortgage loans insured by U.S. government agencies of \$6.3 billion and \$7.6 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
- (h) Excludes PCI loans. The 30+ day delinquency rate for PCI loans was 9.11% and 10.47% at March 31, 2017 and 2016, respectively.
- (i) Period-end credit card loans included loans held-for-sale of \$99 million and \$78 million at March 31, 2017 and 2016, respectively. These amounts are excluded when calculating delinquency rates.
- (j) Excluded student loans insured by U.S. government agencies under FFELP of \$471 million at March 31, 2016, that are 30 or more days past due. This amount has been excluded based upon the government guarantee.

Selected metrics

(in billions, except ratios and where otherwise noted)	As of or for the three months ended March 31,		
	2017	2016	Change
Business Metrics			
CCB households (in millions)	60.4	58.5	3%
Number of branches	5,246	5,385	(3)
Active digital customers (in thousands) ^(a)	45,463	42,458	7
Active mobile customers (in thousands) ^(b)	27,256	23,821	14
Debit and credit card sales volume	208.4	187.2	11
Consumer & Business Banking			
Average deposits	\$ 609.0	\$ 548.4	11
Deposit margin	1.88%	1.86%	
Business banking origination volume	\$ 1.7	\$ 1.7	1
Client investment assets	245.1	220.0	11
Mortgage Banking			
Mortgage origination volume by channel			
Retail	\$ 9.0	\$ 8.7	3
Correspondent	13.4	13.7	(2)
Total mortgage origination volume^(c)	\$ 22.4	\$ 22.4	–
Total loans serviced (period-end)	\$ 836.3	\$ 898.7	(7)
Third-party mortgage loans serviced (period-end)	582.6	655.4	(11)
MSR carrying value (period-end)	6.1	5.7	7
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	1.05%	0.87%	
MSR revenue multiple ^(d)	3.00x	2.49x	
Card, excluding Commercial Card			
Credit card sales volume	\$ 139.7	\$ 121.7	15
New accounts opened (in millions)	2.5	2.3	9
Card Services			
Net revenue rate	10.15%	11.81%	
Commerce Solutions			
Merchant processing volume	\$ 274.3	\$ 247.5	11
Auto			
Loan and lease origination volume	\$ 8.0	\$ 9.6	(17)
Average Auto operating lease assets	13.8	9.6	43%

(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 \$25.6 billion and \$24.4 billion for the three months ended March 31, 2017 and 2016, respectively.

(d) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of annualized loan servicing-related revenue to third-party mortgage loans serviced (average).

Mortgage servicing-related matters

The Firm has resolved the majority of the consent orders and settlements into which it entered with federal and state 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 of 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 Firm is committed to fulfilling its commitments with appropriate diligence.

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 157.

Selected income statement data

(in millions, except ratios)	Three months ended March 31,		
	2017	2016	Change
Revenue			
Investment banking fees	\$ 1,812	\$ 1,321	37%
Principal transactions	3,507	2,470	42
Lending- and deposit-related fees	388	394	(2)
Asset management, administration and commissions	1,052	1,069	(2)
All other income	177	280	(37)
Noninterest revenue	6,936	5,534	25
Net interest income	2,600	2,601	–
Total net revenue^(a)	9,536	8,135	17
Provision for credit losses	(96)	459	NM
Noninterest expense			
Compensation expense	2,800	2,600	8
Noncompensation expense	2,321	2,208	5
Total noninterest expense	5,121	4,808	7
Income before income tax expense	4,511	2,868	57
Income tax expense	1,270	889	43
Net income	\$ 3,241	\$ 1,979	64%
Financial ratios			
Return on equity	18%	11%	
Overhead ratio	54	59	
Compensation to revenue ratio	29	32	

(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 \$551 million and \$498 million for the three months ended March 31, 2017 and 2016, respectively.

Selected income statement data

(in millions)	Three months ended March 31,		
	2017	2016	Change
Revenue by business			
Investment Banking	\$ 1,651	\$ 1,231	34%
Treasury Services	981	884	11
Lending	389	302	29
Total Banking	3,021	2,417	25
Fixed Income Markets	4,215	3,597	17
Equity Markets	1,606	1,576	2
Securities Services	916	881	4
Credit Adjustments & Other ^(a)	(222)	(336)	34
Total Markets & Investor Services	6,515	5,718	14
Total net revenue	\$ 9,536	\$ 8,135	17%

(a) Consists primarily of credit valuation adjustments ("CVA") managed by the Credit Portfolio Group, 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 70-71, and Notes 2, 3 and 18.

Quarterly results

Net income was \$3.2 billion, up 64%, reflecting higher net revenue, a lower provision for credit losses and a tax benefit related to the appreciation of the Firm's stock price upon vesting of employee stock-based awards above their original grant price, partially offset by higher noninterest expense.

Net revenue was \$9.5 billion, up 17%.

Banking revenue was \$3.0 billion, up 25%. Investment banking revenue was \$1.7 billion, up 34%, 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 \$917 million, up 73%, driven by a higher share of fees and overall increase in industry-wide fee levels. Performance in the prior year quarter was impacted by fewer large acquisition financing deals. Equity underwriting fees were \$394 million, up 92%, driven by growth in industry-wide issuance including a strong IPO market. Advisory fees were \$501 million, down 14%, compared to a strong prior-year quarter. Treasury Services revenue was \$981 million, up 11%, driven by the impact of higher interest rates and growth in operating deposits. Lending revenue was \$389 million, up 29%, reflecting higher gains on securities received from restructurings and lower fair value losses on hedges of accrual loans.

Markets & Investor Services revenue was \$6.5 billion, up 14%. Fixed Income Markets revenue was \$4.2 billion, up 17%, driven by higher revenue in Securitized Products, Rates and Credit. Performance in Securitized Products and Credit was driven by strong demand and spread tightening.

Rates improved with increased market activity, particularly in Europe in advance of upcoming elections and in reaction to central bank actions. Equity Markets revenue was \$1.6 billion, up 2%, driven by higher revenue in Prime Services and corporate derivatives partially offset by lower revenue from other derivatives. Securities Services revenue was \$916 million, up 4%. Credit Adjustments & Other was a loss of \$222 million, largely driven by valuation adjustments.

The provision for credit losses was a benefit of \$96 million, compared with an expense of \$459 million in the prior year, which primarily reflected increases in the allowance for credit losses in the Oil & Gas and Metals & Mining portfolios.

Noninterest expense was \$5.1 billion, up 7%, largely driven by higher performance-based compensation expense.

Selected metrics

(in millions, except headcount)	As of or for the three months ended March 31,		
	2017	2016	Change
Selected balance sheet data (period-end)			
Assets	\$ 840,304	\$ 801,053	5%
Loans:			
Loans retained ^(a)	107,902	109,132	(1)
Loans held-for-sale and loans at fair value	6,477	2,381	172
Total loans	114,379	111,513	3
Core loans	114,003	111,050	3
Equity	70,000	64,000	9
Selected balance sheet data (average)			
Assets	\$ 838,017	\$ 797,548	5
Trading assets-debt and equity instruments	328,339	285,122	15
Trading assets-derivative receivables	58,948	62,557	(6)
Loans:			
Loans retained ^(a)	108,389	108,712	–
Loans held-for-sale and loans at fair value	5,308	3,204	66
Total loans	113,697	111,916	2
Core loans	113,309	111,417	2
Equity	70,000	64,000	9
Headcount	48,700	49,067	(1)%

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

Selected metrics

(in millions, except ratios)	As of or for the three months ended March 31,		
	2017	2016	Change
Credit data and quality statistics			
Net charge-offs/(recoveries)	\$ (18)	\$ 46	NM
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained ^(a)	308	650	(53)%
Nonaccrual loans held-for-sale and loans at fair value	109	7	NM
Total nonaccrual loans	417	657	(37)
Derivative receivables	179	212	(16)
Assets acquired in loan satisfactions	87	62	40
Total nonperforming assets	683	931	(27)
Allowance for credit losses:			
Allowance for loan losses	1,346	1,497	(10)
Allowance for lending-related commitments	797	744	7
Total allowance for credit losses	2,143	2,241	(4)%
Net charge-off/(recovery) rate ^(b)	(0.07)%	0.17%	
Allowance for loan losses to period-end loans retained	1.25	1.37	
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits ^(c)	1.91	2.11	
Allowance for loan losses to nonaccrual loans retained ^(a)	437	230	
Nonaccrual loans to total period-end loans	0.36 %	0.59%	

(a) Allowance for loan losses of \$61 million and \$233 million were held against these nonaccrual loans at March 31, 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.

Investment banking fees

(in millions)	Three months ended March 31,		
	2017	2016	Change
Advisory	\$ 501	\$ 585	(14)%
Equity underwriting	394	205	92
Debt underwriting ^(a)	917	531	73
Total investment banking fees	\$ 1,812	\$ 1,321	37%

(a) Includes loans syndication

League table results - wallet share

	Three months ended March 31, 2017		Full-year 2016	
	Rank	Share	Rank	Share
Based on fees ^(a)				
Debt, equity and equity-related				
Global	# 1	7.7%	# 1	7.2%
U.S.	1	10.7	1	11.9
Long-term debt^(b)				
Global	1	7.7	1	6.9
U.S.	2	10.0	2	11.1
Equity and equity-related^(c)				
Global	1	7.8	1	7.6
U.S.	1	11.7	1	13.3
M&A^(d)				
Global	2	8.8	2	8.4
U.S.	2	10.1	2	10.0
Loan syndications				
Global	1	10.7	1	9.3
U.S.	1	11.9	2	11.8
Global investment banking fees^(e)				
	# 1	8.5%	# 1	8.0%

(a) Source: Dealogic as of April 3, 2017. Reflects the ranking of revenue wallet and market share.

(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") 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. 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.

(in millions)	Three months ended March 31,			Three months ended March 31,		
	2017			2016		
	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	\$ 2,701	\$ 1,009	\$ 3,710	\$ 1,985	\$ 870	\$ 2,855
Lending- and deposit-related fees	49	1	50	49	–	49
Asset management, administration and commissions	104	423	527	103	443	546
All other income	177	(7)	170	224	–	224
Noninterest revenue	3,031	1,426	4,457	2,361	1,313	3,674
Net interest income	1,184	180	1,364	1,236	263	1,499
Total net revenue	\$ 4,215	\$ 1,606	\$ 5,821	\$ 3,597	\$ 1,576	\$ 5,173

Selected metrics

(in millions, except where otherwise noted)	As of or for the three months ended March 31,		
	2017	2016	Change
Assets under custody ("AUC") by asset class (period-end) (in billions):			
Fixed Income	\$ 12,473	\$ 12,422	—%
Equity	6,856	6,117	12
Other ^(a)	2,054	1,744	18
Total AUC	\$ 21,383	\$ 20,283	5
Client deposits and other third party liabilities (average) ^(b)	\$ 391,716	\$ 358,926	9
Trade finance loans (period-end)	16,613	18,078	(8)%

(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.

International metrics

(in millions, except where otherwise noted)	As of or for the three months ended March 31,		
	2017	2016	Change
Total net revenue^(a)			
Europe/Middle East/Africa	\$ 3,189	\$ 2,457	30%
Asia/Pacific	1,239	1,302	(5)
Latin America/Caribbean	341	321	6
Total international net revenue	4,769	4,080	17
North America	4,767	4,055	18
Total net revenue	\$ 9,536	\$ 8,135	17
Loans retained (period-end)^(a)			
Europe/Middle East/Africa	\$ 26,290	\$ 27,219	(3)
Asia/Pacific	13,942	15,507	(10)
Latin America/Caribbean	7,074	8,751	(19)
Total international loans	47,306	51,477	(8)
North America	60,596	57,655	5
Total loans retained	\$ 107,902	\$ 109,132	(1)
Client deposits and other third-party liabilities (average)^{(a)(b)}			
Europe/Middle East/Africa	\$ 137,504	\$ 128,359	7
Asia/Pacific	73,007	62,715	16
Latin America/Caribbean	23,897	22,265	7
Total international	\$ 234,408	\$ 213,339	10
North America	157,308	145,587	8
Total client deposits and other third-party liabilities	\$ 391,716	\$ 358,926	9
AUC (period-end)^(a) (in billions)			
North America	\$ 12,768	\$ 12,264	4
All other regions	8,615	8,019	7
Total AUC	\$ 21,383	\$ 20,283	5%

(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.

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 158.

Selected income statement data

(in millions)	Three months ended March 31,		
	2017	2016	Change
Revenue			
Lending- and deposit-related fees	\$ 235	\$ 232	1%
Asset management, administration and commissions	18	22	(18)
All other income ^(a)	346	302	15
Noninterest revenue	599	556	8
Net interest income	1,419	1,247	14
Total net revenue^(b)	2,018	1,803	12
Provision for credit losses	(37)	304	NM
Noninterest expense			
Compensation expense	371	334	11
Noncompensation expense	454	379	20
Total noninterest expense	825	713	16
Income before income tax expense	1,230	786	56
Income tax expense	431	290	49
Net income	\$ 799	\$ 496	61%

(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 \$121 million and \$120 million for the three months ended March 31, 2017 and 2016, respectively.

Quarterly results

Net income was \$799 million, an increase of 61%, driven by a lower provision for credit losses and higher net revenue, partially offset by higher noninterest expense.

Net revenue was \$2.0 billion, an increase of 12%. Net interest income was \$1.4 billion, a 14% increase, driven by higher deposit spreads and loan growth. Noninterest revenue was \$599 million, up 8%, reflecting higher investment banking revenue largely from higher loan syndication fees.

Noninterest expense was \$825 million, an increase of 16%. Noninterest expense in the current quarter included \$29 million of impairment expense on leased assets, as well as reflected increased hiring of bankers and business related support staff, and investments in technology.

The provision for credit losses was a benefit of \$37 million driven by the Oil & Gas portfolio, partially offset by select client downgrades. The prior year provision for credit losses was an expense of \$304 million, driven by the Oil & Gas portfolio.

Selected income statement data (continued)

(in millions, except ratios)	Three months ended March 31,		
	2017	2016	Change
Revenue by product			
Lending	\$ 992	\$ 928	7%
Treasury services	796	694	15
Investment banking ^(a)	216	155	39
Other	14	26	(46)
Total Commercial Banking net revenue	\$ 2,018	\$ 1,803	12
Investment banking revenue, gross ^(b)	\$ 646	\$ 483	34
Revenue by client segment			
Middle Market Banking	\$ 797	\$ 707	13
Corporate Client Banking	653	547	19
Commercial Term Lending	367	361	2
Real Estate Banking	134	104	29
Other	67	84	(20)
Total Commercial Banking net revenue	\$ 2,018	\$ 1,803	12%
Financial ratios			
Return on equity	15%	11%	
Overhead ratio	41	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.

Selected metrics

(in millions, except headcount)	As of or for the three months ended March 31,		
	2017	2016	Change
Selected balance sheet data (period-end)			
Total assets	\$ 217,348	\$ 204,602	6%
Loans:			
Loans retained	194,538	173,583	12
Loans held-for-sale and loans at fair value	1,056	338	212
Total loans	\$ 195,594	\$ 173,921	12
Core loans	195,296	173,316	13
Equity	20,000	16,000	25
Period-end loans by client segment			
Middle Market Banking	\$ 55,116	\$ 51,644	7
Corporate Client Banking	45,795	40,712	12
Commercial Term Lending	72,496	64,292	13
Real Estate Banking	15,846	11,656	36
Other	6,341	5,617	13
Total Commercial Banking loans	\$ 195,594	\$ 173,921	12
Selected balance sheet data (average)			
Total assets	\$ 213,784	\$ 202,492	6
Loans:			
Loans retained	190,774	169,837	12
Loans held-for-sale and loans at fair value	717	448	60
Total loans	\$ 191,491	\$ 170,285	12
Core loans	191,180	169,626	13
Average loans by client segment			
Middle Market Banking	\$ 54,269	\$ 50,557	7
Corporate Client Banking	43,580	39,348	11
Commercial Term Lending	71,880	63,475	13
Real Estate Banking	15,525	11,464	35
Other	6,237	5,441	15
Total Commercial Banking loans	\$ 191,491	\$ 170,285	12
Client deposits and other third-party liabilities	176,780	173,079	2
Equity	20,000	16,000	25
Headcount	8,554	7,971	7%

Selected metrics (continued)

(in millions, except ratios)	As of or for the three months ended March 31,		
	2017	2016	Change
Credit data and quality statistics			
Net charge-offs/(recoveries)	\$ (10)	\$ 6	NM
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained ^(a)	929	1,257	(26)%
Nonaccrual loans held-for-sale and loans at fair value	—	—	—
Total nonaccrual loans	929	1,257	(26)
Assets acquired in loan satisfactions	11	1	NM
Total nonperforming assets	940	1,258	(25)
Allowance for credit losses:			
Allowance for loan losses	2,896	3,099	(7)
Allowance for lending-related commitments	251	252	—
Total allowance for credit losses	3,147	3,351	(6)%
Net charge-off/(recovery) rate ^(b)	(0.02)%	0.01%	
Allowance for loan losses to period-end loans retained	1.49	1.79	
Allowance for loan losses to nonaccrual loans retained ^(a)	312	247	
Nonaccrual loans to period-end total loans	0.47	0.72	

(a) Allowance for loan losses of \$115 million and \$278 million was held against nonaccrual loans retained at March 31, 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 158–159.

Selected income statement data

(in millions, except ratios)	Three months ended March 31,		
	2017	2016	Change
Revenue			
Asset management, administration and commissions	\$ 2,105	\$ 2,016	4%
All other income	163	229	(29)
Noninterest revenue	2,268	2,245	1
Net interest income	819	727	13
Total net revenue	3,087	2,972	4
Provision for credit losses	18	13	38
Noninterest expense			
Compensation expense	1,331	1,241	7
Noncompensation expense	1,249	834	50
Total noninterest expense	2,580	2,075	24
Income before income tax expense	489	884	(45)
Income tax expense	104	297	(65)
Net income	\$ 385	\$ 587	(34)
Revenue by line of business			
Asset Management	\$ 1,487	\$ 1,499	(1)
Wealth Management	1,600	1,473	9
Total net revenue	\$ 3,087	\$ 2,972	4%
Financial ratios			
Return on equity	16%	25%	
Overhead ratio	84	70	
Pre-tax margin ratio:			
Asset Management	1	33	
Wealth Management	30	26	
Asset & Wealth Management	16	30	

Quarterly results

Net income was \$385 million, a decrease of 34%, reflecting higher noninterest expense partially offset by higher net revenue.

Net revenue was \$3.1 billion, an increase of 4%. Net interest income was \$819 million, up 13%, driven predominantly by higher deposit spreads. Noninterest revenue was \$2.3 billion, up 1%, reflecting higher market levels. The prior year quarter included a \$150 million gain on the sale of an asset.

Noninterest expense was \$2.6 billion, an increase of 24%, predominantly driven by higher legal expense.

Selected metrics

(in millions, except ranking data, headcount and ratios)	As of or for the three months ended March 31,		
	2017	2016	Change
% of JPM mutual fund assets rated as 4- or 5-star ^(a)	63%	49%	
% of JPM mutual fund assets ranked in 1 st or 2 nd quartile: ^(b)			
1 year	59	56	
3 years	80	76	
5 years	77	78	
Selected balance sheet data (period-end)			
Total assets	\$ 141,049	\$ 131,276	7%
Loans ^(c)	119,947	111,050	8
Core loans	119,947	111,050	8
Deposits	157,295	152,908	3
Equity	9,000	9,000	–
Selected balance sheet data (average)			
Total assets	\$ 138,178	\$ 129,790	6
Loans	118,310	110,497	7
Core loans	118,310	110,497	7
Deposits	158,810	150,616	5
Equity	9,000	9,000	–
Headcount	22,196	20,885	6
Number of client advisors	2,480	2,750	(10)
Credit data and quality statistics			
Net charge-offs	\$ 3	\$ 9	(67)
Nonaccrual loans	379	335	13
Allowance for credit losses:			
Allowance for loan losses	289	270	7
Allowance for lending-related commitments	4	4	–
Total allowance for credit losses	293	274	7%
Net charge-off rate	0.01%	0.03%	
Allowance for loan losses to period-end loans	0.24	0.24	
Allowance for loan losses to nonaccrual loans	76	81	
Nonaccrual loans to period-end loans	0.32	0.30	

(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: Lipper 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) Included \$34.5 billion and \$27.7 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at March 31, 2017 and 2016, respectively.

Client assets

Client assets of \$2.5 trillion and assets under management of \$1.8 trillion were both up 10%, reflecting higher market levels, and net inflows into liquidity and long-term products.

Client assets

(in billions)	March 31,		
	2017	2016	Change
Assets by asset class			
Liquidity	\$ 444	\$ 386	15%
Fixed income	432	403	7
Equity	378	346	9
Multi-asset and alternatives	587	541	9
Total assets under management	1,841	1,676	10
Custody/brokerage/administration/deposits	707	647	9
Total client assets	\$ 2,548	\$ 2,323	10
Memo:			
Alternatives client assets ^(a)	\$ 157	\$ 151	4
Assets by client segment			
Private Banking	\$ 468	\$ 428	9
Institutional	889	798	11
Retail	484	450	8
Total assets under management	\$ 1,841	\$ 1,676	10
Private Banking	\$ 1,154	\$ 1,057	9
Institutional	908	814	12
Retail	486	452	8
Total client assets	\$ 2,548	\$ 2,323	10%

(a) Represents assets under management, as well as client balances in brokerage accounts.

Client assets (continued)

(in billions)	Three months ended March 31,	
	2017	2016
Assets under management rollforward		
Beginning balance	\$ 1,771	\$ 1,723
Net asset flows:		
Liquidity	1	(30)
Fixed income	5	14
Equity	(4)	(5)
Multi-asset and alternatives	7	6
Market/performance/other impacts	61	(32)
Ending balance, March 31	\$ 1,841	\$ 1,676
Client assets rollforward		
Beginning balance	\$ 2,453	\$ 2,350
Net asset flows	10	(7)
Market/performance/other impacts	85	(20)
Ending balance, March 31	\$ 2,548	\$ 2,323

International metrics

(in millions)	Three months ended March 31,		
	2017	2016	Change
Total net revenue ^(a)			
Europe/Middle East/Africa	\$ 462	\$ 431	7%
Asia/Pacific	270	255	6
Latin America/Caribbean	179	172	4
Total international net revenue	911	858	6
North America	2,176	2,114	3
Total net revenue	\$ 3,087	\$ 2,972	4%

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

(in billions)	March 31,		
	2017	2016	Change
Assets under management			
Europe/Middle East/Africa	\$ 323	\$ 293	10%
Asia/Pacific	131	120	9
Latin America/Caribbean	47	42	12
Total international assets under management	501	455	10
North America	1,340	1,221	10
Total assets under management	\$ 1,841	\$ 1,676	10
Client assets			
Europe/Middle East/Africa	\$ 374	\$ 343	9
Asia/Pacific	187	171	9
Latin America/Caribbean	118	110	7
Total international client assets	679	624	9
North America	1,869	1,699	10
Total client assets	\$ 2,548	\$ 2,323	10%

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 millions, except headcount)	As of or for the three months ended March 31,		
	2017	2016	Change
Revenue			
Principal transactions	\$ 15	\$ 97	(85)%
Securities gains/(losses)	(3)	51	NM
All other income/(loss)	61	121	(50)
Noninterest revenue	73	269	(73)
Net interest income	(98)	(213)	54
Total net revenue^(a)	(25)	56	NM
Provision for credit losses	–	(2)	100
Noninterest expense^(b)	98	153	(36)
Income/(loss) before income tax expense/(benefit)	(123)	(95)	(29)
Income tax expense/(benefit)	(158)	(63)	(151)
Net income/(loss)	\$ 35	\$ (32)	NM
Total net revenue			
Treasury and CIO	(7)	(94)	93
Other Corporate	(18)	150	NM
Total net revenue	\$ (25)	\$ 56	NM
Net income/(loss)			
Treasury and CIO	(67)	(111)	40
Other Corporate	102	79	29
Total net income/(loss)	\$ 35	\$ (32)	NM
Total assets (period-end)	\$ 822,819	\$ 781,806	5
Loans (period-end)	1,483	1,983	(25)
Core loans ^(c)	1,480	1,978	(25)
Headcount	33,305	29,572	13

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of \$228 million and \$218 million for the three months ended March 31, 2017 and 2016, respectively.

(b) Included legal expense/(benefit) of \$(228) million for the three months ended March 31, 2017, legal expense/(benefit) for the three months ended March 31, 2016 was not material.

(c) Average core loans were \$1.6 billion and \$2.1 billion for the three months ended March 31, 2017 and 2016, respectively.

Quarterly results

Net income was \$35 million, compared with a net loss of \$32 million in the prior year. Net revenue was a loss of \$25 million, compared to a gain of \$56 million in the prior year. Noninterest expense was \$98 million, compared with \$153 million in the prior year. The current quarter included the release of certain legal reserves.

Treasury and CIO overview

At March 31, 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 10 for further information on the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 57-61. For information on interest rate, foreign exchange and other risks, see Market Risk Management on pages 62-66.

Selected income statement and balance sheet data

(in millions)	As of or for the three months ended March 31,		
	2017	2016	Change
Securities gains/(losses)	\$ (15)	\$ 51	NM
Investment securities portfolio (average) ^(a)	284,203	283,443	–
Investment securities portfolio (period-end) ^(b)	279,530	282,424	(1)%
Mortgage loans (average)	1,454	2,005	(27)
Mortgage loans (period-end)	1,404	1,927	(27)

(a) Average investment securities included HTM balances of \$49.4 billion and \$48.3 billion for the three months ended March 31, 2017 and 2016, respectively.

(b) Period-end investment securities included HTM balances of \$48.9 billion and \$47.9 billion at March 31, 2017 and 2016, respectively.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan 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 within 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 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 Board of Directors.

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.

Risk disclosure	Form 10-Q page reference	Annual Report page reference
Enterprise-Wide Risk Management	31-66	71-131
I. Economic risks		
Capital Risk Management	32-39	76-85
Credit Risk Management	40-55	86-107
Country Risk Management	56	108-109
Liquidity Risk Management	57-61	110-115
Market Risk Management	62-66	116-123
Principal Risk Management		124
II. Other core risks		
Compliance Risk Management		125
Conduct Risk Management		126
Legal Risk Management		127
Model Risk Management		128
Operational Risk Management		129-130
Reputation Risk Management		131

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 on the Firm's Capital Risk Management see pages 76-85 of JPMorgan 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 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 management 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 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 current and Fully Phased-In regulatory minimums as of March 31, 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.

March 31, 2017 (in millions, except ratios)	Transitional			Fully Phased-In		
	Standardized	Advanced	Minimum capital ratios ^(c)	Standardized	Advanced	Minimum capital ratios ^(d)
Risk-based capital metrics:						
CET1 capital	\$ 184,337	\$ 184,337		\$ 183,887	\$ 183,887	
Tier 1 capital	209,653	209,653		209,420	209,420	
Total capital	240,222	229,436		238,800	228,014	
Risk-weighted assets	1,468,931	1,467,992		1,479,236	1,478,915	
CET1 capital ratio	12.5%	12.6%	7.5%	12.4%	12.4%	10.5%
Tier 1 capital ratio	14.3	14.3	9.0	14.2	14.2	12.0
Total capital ratio	16.4	15.6	11.0	16.1	15.4	14.0
Leverage-based capital metrics						
Adjusted average assets	\$ 2,486,114	\$ 2,486,114		\$ 2,486,410	\$ 2,486,410	
Tier 1 leverage ratio ^(a)	8.4%	8.4%	4.0%	8.4%	8.4%	4.0%
Total leverage exposure	NA	\$ 3,171,822		NA	\$ 3,172,118	
SLR ^(b)	NA	6.6%	NA	NA	6.6%	5.0% ^(e)

December 31, 2016 (in millions, except ratios)	Transitional			Fully Phased-In		
	Standardized	Advanced	Minimum capital ratios ^(c)	Standardized	Advanced	Minimum capital ratios ^(d)
Risk-based capital metrics:						
CET1 capital	\$ 182,967	\$ 182,967		\$ 181,734	\$ 181,734	
Tier 1 capital	208,112	208,112		207,474	207,474	
Total capital	239,553	228,592		237,487	226,526	
Risk-weighted assets	1,464,981	1,476,915		1,474,665	1,487,180	
CET1 capital ratio	12.5%	12.4%	6.25%	12.3%	12.2%	10.5%
Tier 1 capital ratio	14.2	14.1	7.75	14.1	14.0	12.0
Total capital ratio	16.4	15.5	9.75	16.1	15.2	14.0
Leverage-based capital metrics						
Adjusted average assets	\$ 2,484,631	\$ 2,484,631		\$ 2,485,480	\$ 2,485,480	
Tier 1 leverage ratio ^(a)	8.4%	8.4%	4.0%	8.3%	8.3%	4.0%
Total leverage exposure	NA	\$ 3,191,990		NA	\$ 3,192,839	
SLR ^(b)	NA	6.5%	NA	NA	6.5%	5.0% ^(e)

Note: As of March 31, 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 34.

- (a) The Tier 1 leverage ratio is calculated by dividing Tier 1 capital by adjusted average assets.
- (b) 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 37.
- (c) Represents the Transitional minimum capital ratios applicable to the Firm under Basel III as of March 31, 2017, and December 31, 2016. At March 31, 2017, the CET1 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% global systemically important banks ("GSIB") surcharge. At December 31, 2016, the CET1 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. For additional information on the GSIB surcharge, see pages 34-35.
- (d) Represents the minimum capital ratios applicable to the Firm on a Fully Phased-In Basel III basis. At March 31, 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. For additional information on the GSIB surcharge, see pages 34-35.
- (e) In the case of the SLR, the Fully Phased-In minimum ratio is effective beginning January 1, 2018.

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 presents two comprehensive methodologies for calculating RWA: a general (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”).

Basel III establishes capital requirements for calculating credit risk and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. 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. 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.

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate SLR. For additional information on SLR, see page 37.

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-In 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-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 13–15.

The Firm’s estimates of its Basel III Standardized and Advanced Fully Phased-In 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 Basel III rules include minimum capital ratio requirements that are subject to phase-in periods through the end of 2018. 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”). 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 19. 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>).

All banking institutions are currently required to have a minimum capital ratio of 4.5% of CET1 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 distributed, including dividends and common equity repurchases. The capital conservation buffer is subject to a phase-in period that began January 1, 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-jurisdictional activity, interconnectedness, complexity and substitutability. The second (“Method 2”), modifies the Method 1 requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score “multiplication factor”.

The Firm’s Fully Phased-In GSIB surcharge for 2016 was calculated to be 2.5% under Method 1 and 4.5% under Method 2. Accordingly, the Firm’s minimum capital ratios applicable in 2016 include a GSIB surcharge of 1.125%, resulting from the application of the transition provision 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 of a GSIB surcharge of 1.75% in the Firm's minimum capital ratios after application of the transition provisions.

The countercyclical capital buffer takes into account the macro financial environment in which large, internationally active banks function. As of October 24, 2016, the Federal Reserve reaffirmed setting the U.S. countercyclical capital buffer at 0%, and stated that it will review the amount at least annually. The countercyclical capital buffer can be increased if the Federal Reserve, FDIC and Office of the Comptroller of the Currency ("OCC") determine that credit growth in the economy has become excessive and can be set at up to an additional 2.5% of RWA subject to a 12-month implementation period.

Based on the Firm's most recent estimate of its GSIB surcharge and the countercyclical buffer current being set at 0%, the Firm estimates its Fully Phased-In CET1 capital requirement, at January 1, 2019, would be 10.5% (reflecting the 4.5% CET1 capital requirement, the Fully Phased-In 2.5% capital conservation buffer and the GSIB surcharge of 3.5%). As well as meeting the capital ratio requirements of Basel III, the Firm must, in order to be "well-capitalized", maintain a minimum 6% Tier 1 capital and a 10% Total capital requirement. At March 31, 2017 and December 31, 2016, the Firm maintained Basel III Standardized Transitional and Basel III Advanced Transitional ratios in excess of the well-capitalized standards established by the Federal Reserve.

The Firm continues to believe that over the next several years, it will operate with a Basel III CET1 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.

Each of the Firm's IDI subsidiaries must maintain a minimum 6.5% CET1, 8% Tier 1 capital, 10% Total capital and 5% Tier 1 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.

Capital

A reconciliation of total stockholders' equity to Basel III Fully Phased-In CET1 capital, Tier 1 capital and Basel III Advanced and Standardized Fully Phased-In Total capital is presented in the table below.

For additional information on the components of regulatory capital, see Note 19.

Capital components

(in millions)	March 31, 2017
Total stockholders' equity	\$ 255,863
Less: Preferred stock	26,068
Common stockholders' equity	229,795
Less:	
Goodwill	47,292
Other intangible assets	847
Add:	
Deferred tax liabilities ^(a)	3,225
Less: Other CET1 capital adjustments	994
Standardized/Advanced CET1 capital	183,887
Preferred stock	26,068
Less:	
Other Tier 1 adjustments ^(b)	535
Standardized/Advanced Tier 1 capital	\$ 209,420
Long-term debt and other instruments qualifying as Tier 2 capital	\$ 15,029
Qualifying allowance for credit losses	14,490
Other	(139)
Standardized Fully Phased-In Tier 2 capital	\$ 29,380
Standardized Fully Phased-in Total capital	\$ 238,800
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital	(10,786)
Advanced Fully Phased-In Tier 2 capital	\$ 18,594
Advanced Fully Phased-In Total capital	\$ 228,014

(a) Represents deferred 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.

(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 March 31, 2017.

The following table presents a reconciliation of the Firm's Basel III Transitional CET1 capital to the Firm's estimated Basel III Fully Phased-In CET1 capital as of March 31, 2017.

(in millions)	March 31, 2017
Transitional CET1 capital	\$ 184,337
AOCI phase-in ^(a)	(27)
CET1 capital deduction phase-in ^(b)	(267)
Intangibles deduction phase-in ^(c)	(154)
Other adjustments to CET1 capital ^(d)	(2)
Fully Phased-In CET1 capital	\$ 183,887

- (a) Includes the remaining balance of accumulated other comprehensive income ("AOCI") related to available-for-sale ("AFS") debt securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans that will qualify as Basel III CET1 capital upon full phase-in.
- (b) Predominantly includes regulatory adjustments related to changes in DVA, as well as CET1 deductions for defined benefit pension plan assets and deferred tax assets related to net operating loss ("NOL") and tax credit carryforwards.
- (c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CET1 capital upon full phase-in.
- (d) Includes minority interest and the Firm's investments in its own CET1 capital instruments.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CET1 capital, Tier 1 capital and Tier 2 capital for the three months ended March 31, 2017.

Three months ended March 31, (in millions)	2017
Standardized/Advanced CET1 capital at December 31, 2016	\$ 181,734
Net income applicable to common equity	6,036
Dividends declared on common stock	(1,813)
Net purchase of treasury stock	(1,570)
Changes in additional paid-in capital	(1,232)
Changes related to AOCI	193
Adjustment related to DVA ^(a)	142
Other	397
Increase in Standardized/Advanced CET1 capital	2,153
Standardized/Advanced CET1 capital at March 31, 2017	\$ 183,887
Standardized/Advanced Tier 1 capital at December 31, 2016	\$ 207,474
Change in CET1 capital	2,153
Net issuance of noncumulative perpetual preferred stock	-
Other	(207)
Increase in Standardized/Advanced Tier 1 capital	1,946
Standardized/Advanced Tier 1 capital at March 31, 2017	\$ 209,420
Standardized Tier 2 capital at December 31, 2016	\$ 30,013
Change in long-term debt and other instruments qualifying as Tier 2	(224)
Change in qualifying allowance for credit losses	(364)
Other	(45)
Decrease in Standardized Tier 2 capital	(633)
Standardized Tier 2 capital at March 31, 2017	\$ 29,380
Standardized Total capital at March 31, 2017	\$ 238,800
Advanced Tier 2 capital at December 31, 2016	\$ 19,052
Change in long-term debt and other instruments qualifying as Tier 2	(224)
Change in qualifying allowance for credit losses	(189)
Other	(45)
Decrease in Advanced Tier 2 capital	(458)
Advanced Tier 2 capital at March 31, 2017	\$ 18,594
Advanced Total capital at March 31, 2017	\$ 228,014

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

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the three months ended March 31, 2017. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Three months ended March 31, 2017 (in millions)	Standardized			Advanced			
	Credit risk RWA	Market risk RWA	Total RWA	Credit risk RWA	Market risk RWA	Operational risk RWA	Total RWA
At December 31, 2016	\$ 1,346,986	\$ 127,679	\$ 1,474,665	\$ 959,523	\$ 127,657	\$ 400,000	\$ 1,487,180
Model & data changes ^(a)	300	5,300	5,600	(198)	5,300	–	5,102
Portfolio runoff ^(b)	(2,200)	–	(2,200)	(3,100)	–	–	(3,100)
Movement in portfolio levels ^(c)	(3,738)	4,909	1,171	(14,986)	4,719	–	(10,267)
Changes in RWA	(5,638)	10,209	4,571	(18,284)	10,019	–	(8,265)
March 31, 2017	\$ 1,341,348	\$ 137,888	\$ 1,479,236	\$ 941,239	\$ 137,676	\$ 400,000	\$ 1,478,915

- (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 reduced risk from position rollofs in legacy portfolios in Mortgage Banking (under both the Standardized and Advanced framework); and for market risk RWA reflects reduced risk from position rollofs in legacy portfolios in the wholesale businesses.
- (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 the SLR, see Capital Risk Management on page 82 of JPMorgan Chase's 2016 Annual Report.

The following table presents the components of the Firm's Fully Phased-In SLR as of March 31, 2017.

(in millions, except ratio)	March 31, 2017
Tier 1 Capital	\$ 209,420
Total average assets	2,533,162
Less: Adjustments for deductions from Tier 1 capital	46,752
Total adjusted average assets ^(a)	2,486,410
Off-balance sheet exposures ^(b)	685,708
Total leverage exposure	\$ 3,172,118
SLR	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 1 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 March 31, 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 9.6%, 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 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

(in billions)	March 31, 2017	December 31, 2016
Consumer & Community Banking	\$ 51.0	\$ 51.0
Corporate & Investment Bank	70.0	64.0
Commercial Banking	20.0	16.0
Asset & Wealth Management	9.0	9.0
Corporate	79.8	88.1
Total common stockholders' equity	\$ 229.8	\$ 228.1

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 Firm's business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the 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-In RWA because the Firm believes it to be the best proxy for economic risk. 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.

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 April 5, 2017, the Firm submitted its 2017 Capital Plan to the Federal Reserve under the Federal Reserve's 2017 CCAR process. The Federal Reserve has indicated that it expects to respond to the capital plan submissions of bank holding companies by June 30, 2017.

Capital actions

Preferred stock

Preferred stock dividends declared were \$412 million for the three months ended March 31, 2017.

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

Common stock dividends

On March 21, 2017, the Firm announced that its Board of Directors had increased the quarterly common stock dividend to \$0.50 per share, effective with the dividend paid on April 30, 2017. The Firm's dividends are subject to the Board of Directors' approval at the customary times those dividends are to be declared.

At March 31, 2017, the Firm estimated that its banking subsidiaries could pay, in the aggregate, approximately \$22 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators.

Common equity

Following receipt in June, 2016 of the Federal Reserve's non-objection 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.

The following table sets forth the Firm's repurchases of common equity for the three months ended March 31, 2017 and 2016. There were no warrants repurchased during the three months ended March 31, 2017 and 2016.

(in millions)	Three months ended March 31,	
	2017	2016
Total shares of common stock repurchased	32.1	29.2
Aggregate common stock repurchases	\$ 2,832	\$ 1,696

There were 19.7 million warrants outstanding at March 31, 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 10b5-1 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 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 10b5-1 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 10b5-1 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.

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 the 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 15c3-1 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 March 31, 2017, JPMorgan Securities maintained tentative net capital in excess of the minimum and notification requirements.

The following table presents JPMorgan Securities’ net capital information:

March 31, 2017 (in billions)	Net Capital	
	Actual	Minimum
JPMorgan Chase’s subsidiary:		
JPMorgan Securities	\$ 15.3	\$ 2.8

J.P. Morgan Securities plc

J.P. Morgan Securities plc 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 plc is jointly regulated by the U.K. Prudential Regulatory Authority (“PRA”) and the Financial Conduct Authority (“FCA”). J.P. Morgan Securities plc 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 plc to its requirements.

The following table presents J.P.Morgan Securities plc’s capital information:

March 31, 2017 (in billions, except ratios)	Total capital		CET1 ratio		Total capital ratio	
	Estimated	Minimum	Estimated	Minimum	Estimated	Minimum
JPMorgan Chase, N.A.’s subsidiary:						
J.P. Morgan Securities plc	\$ 37.3	14.1%	4.5%	17.5%	8.0%	

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 provision 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 12, 20, 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 48-50; for information regarding the credit risk inherent in the Firm's investment securities portfolio, see Note 10 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 11 of this Form 10-Q, and Note 13 of JPMorgan Chase's 2016 Annual Report.

Total credit portfolio

(in millions)	Credit exposure		Nonperforming ^{(c)(d)}	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Loans retained	\$ 881,870	\$ 889,907	\$ 5,964	\$ 6,721
Loans held-for-sale ^(a)	12,001	2,628	265	162
Loans at fair value	2,103	2,230	—	—
Total loans	895,974	894,765	6,229	6,883
Derivative receivables	56,063	64,078	179	223
Receivables from customers and other	21,473	17,560	—	—
Total credit-related assets	973,510	976,403	6,408	7,106
Assets acquired in loan satisfactions				
Real estate owned	NA	NA	364	370
Other	NA	NA	54	59
Total assets acquired in loan satisfactions	NA	NA	418	429
Total assets	973,510	976,403	6,826	7,535
Lending-related commitments	995,210	976,702	882	506
Total credit portfolio	\$ 1,968,720	\$ 1,953,105	\$ 7,708	\$ 8,041
Credit derivatives used in credit portfolio management activities ^(b)	\$ (21,575)	\$ (22,114)	\$ —	\$ —
Liquid securities and other cash collateral held against derivatives	(20,361)	(22,705)	NA	NA

(in millions, except ratios)	Three months ended March 31,	
	2017	2016
Net charge-offs ^(e)	\$ 1,654	\$ 1,110
Average retained loans		
Loans	885,577	836,449
Loans - excluding residential real estate PCI loans	850,533	796,055
Net charge-off rates ^(e)		
Loans	0.76%	0.53%
Loans - excluding PCI	0.79	0.56

- (a) Includes the Firm's student loan portfolio, which was transferred to held-for-sale in the first quarter of 2017. For additional information refer to CCB segment results on page 17.
- (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 52 and Note 4.
- (c) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
- (d) At March 31, 2017, and December 31, 2016, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$4.5 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 \$234 million and \$263 million, respectively, that are 90 or more days past due; and (3) real estate owned ("REO") insured by U.S. government agencies of \$121 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").
- (e) For the first quarter of 2017, excluding net charge-offs of \$467 million related to the student loan portfolio write-down, the net charge-off rate for Loans would have been 0.54% and for Loans - excluding PCI would have been 0.57%.

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 12 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 20 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

(in millions, except ratios)	Credit exposure		Nonaccrual loans ^{(i)(k)}		Three months ended March 31,			
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Net charge-offs ^{(d)(l)}		Average annual net charge-off rate ^{(d)(l)(m)}	
					2017	2016	2017	2016
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity	\$ 37,448	\$ 39,063	\$ 1,771	\$ 1,845	\$ 49	\$ 59	0.52%	0.53%
Residential mortgage ^(a)	198,796	192,486	2,136	2,256	3	1	0.01	—
Auto ^(b)	65,568	65,814	188	214	81	67	0.50	0.44
Consumer & Business Banking ^{(a)(c)}	24,386	24,307	298	287	57	56	0.95	0.99
Student ^{(a)(d)}	—	7,057	—	165	498	37	NM	1.85
Total loans, excluding PCI loans and loans held-for-sale	326,198	328,727	4,393	4,767	688	220	0.84	0.29
Loans - PCI								
Home equity	12,369	12,902	NA	NA	NA	NA	NA	NA
Prime mortgage	7,310	7,602	NA	NA	NA	NA	NA	NA
Subprime mortgage	2,860	2,941	NA	NA	NA	NA	NA	NA
Option ARMs ^(e)	11,846	12,234	NA	NA	NA	NA	NA	NA
Total loans - PCI	34,385	35,679	NA	NA	NA	NA	NA	NA
Total loans - retained	360,583	364,406	4,393	4,767	688	220	0.76	0.25
Loans held-for-sale	6,472 ⁽ⁱ⁾	238	156	53	—	—	—	—
Total consumer, excluding credit card loans	367,055	364,644	4,549	4,820	688	220	0.76	0.25
Lending-related commitments ^(f)	53,594	54,797						
Receivables from customers ^(g)	128	120						
Total consumer exposure, excluding credit card	420,777	419,561						
Credit card								
Loans retained ^(h)	134,917	141,711	—	—	993	830	2.94	2.62
Loans held-for-sale	99	105	—	—	—	—	—	—
Total credit card loans	135,016	141,816	—	—	993	830	2.94	2.62
Lending-related commitments ^(f)	577,096	553,891						
Total credit card exposure	712,112	695,707						
Total consumer credit portfolio	\$ 1,132,889	\$ 1,115,268	\$ 4,549	\$ 4,820	\$ 1,681	\$ 1,050	1.35%	0.89%
Memo: Total consumer credit portfolio, excluding PCI	\$ 1,098,504	\$ 1,079,589	\$ 4,549	\$ 4,820	\$ 1,681	\$ 1,050	1.46%	0.97%

Note: Includes the Firm's student loan portfolio, which was transferred to held-for-sale in the first quarter of 2017. For additional information refer to CCB segment results on page 17.

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

(b) At March 31, 2017, and December 31, 2016, excluded operating lease assets of \$14.3 billion and \$13.2 billion, respectively.

(c) Predominantly includes Business Banking loans.

(d) For the first quarter of 2017, excluding net charge-offs of \$467 million related to the student loan portfolio write-down, the net charge-off rate for Total consumer, excluding credit card and PCI loans and loans held-for-sale would have been 0.27%; Total consumer - retained excluding credit card loans would have been 0.24%; Total consumer credit portfolio would have been 0.98%; and Total consumer credit portfolio, excluding PCI loans would have been 1.05%.

(e) At March 31, 2017, and December 31, 2016, approximately 67% and 66%, respectively, of the PCI option adjustable rate mortgage ("ARM") portfolio has been modified into fixed-rate, fully amortizing loans.

(f) 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.

(g) 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.

(h) Includes billed interest and fees net of an allowance for uncollectible interest and fees.

(i) Predominantly represents student loans held-for-sale.

(j) At March 31, 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 \$4.5 billion and \$5.0 billion, respectively; and (2) student loans insured by U.S. government agencies under the FFELP of \$234 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.

(k) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(l) Net charge-offs and the net charge-off rates excluded write-offs in the PCI portfolio of \$24 million and \$47 million for the three months ended March 31, 2017 and 2016, respectively. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 53-55 for further details.

(m) Average consumer loans held-for-sale were \$302 million and \$425 million for the three months ended March 31, 2017 and 2016, respectively. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased during the three months ended March 31, 2017, predominantly due to originations of high-quality prime mortgage loans that have been retained on the balance sheet, partially offset by paydowns and the charge-off or liquidation of delinquent loans and the write-down in the student loan portfolio. 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 12.

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 months ended March 31, 2017, declined when compared with the same periods of the prior year as a result of lower loan balances.

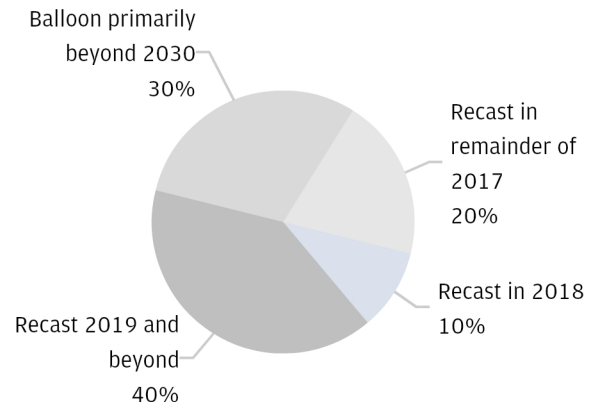
At March 31, 2017, approximately 90% of the Firm's home equity portfolio consists of home equity lines of credit ("HELOCs") and the remainder consists of home equity loans ("HELOANS"). For further information on the Firm's home equity portfolio, see Note 12 of this Form 10-Q and Consumer Credit Portfolio on pages 89-95 of JPMorgan Chase's 2016 Annual Report.

The carrying value of HELOCs outstanding was \$33 billion at March 31, 2017. Of such amounts, \$13 billion have recast from interest-only to fully amortizing payments or have been modified. Of the remaining \$20 billion, approximately:

- \$14 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 \$20 billion of HELOCs scheduled to recast in the future, based upon their current contractual terms.

**HELOCs scheduled to recast
(at March 31, 2017)**



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) 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 30% 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 March 31, 2017, the Firm estimated that the carrying value of its home equity portfolio contained approximately \$1.0 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 12.

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 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 months ended March 31, 2017 remain low, reflecting continued improvement in home prices and delinquencies.

At March 31, 2017, and December 31, 2016, the Firm's residential mortgage portfolio, including loans held-for-sale, included \$9.4 billion and \$9.5 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which \$6.3 billion and \$7.0 billion, respectively, were 30 days or more past due (of these past due loans, \$4.5 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 March 31, 2017, and December 31, 2016, the Firm's residential mortgage portfolio included \$19.4 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 largely offset by new originations. Nonaccrual loans decreased compared with December 31, 2016. Net charge-offs for the three months ended March 31, 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 were relatively flat compared with December 31, 2016, as growth in loan originations were largely 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 months ended March 31, 2017 were flat compared to the prior year.

Student: The Firm transferred the student loan portfolio to held-for-sale in the first quarter of 2017. Net charge-offs for the three months ended March 31, 2017 increased as a result of the \$467 million 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 March 31, 2017, approximately 11% of the option ARM PCI loans were delinquent and approximately 67% 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.

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

Summary of PCI loans lifetime principal loss estimates

(in billions)	Lifetime loss estimates ^(a)		Life-to-date liquidation losses ^(b)	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Home equity	\$ 14.1	\$ 14.4	\$ 12.8	\$ 12.8
Prime mortgage	3.9	4.0	3.7	3.7
Subprime mortgage	3.1	3.2	3.1	3.1
Option ARMs	9.9	10.0	9.7	9.7
Total	\$ 31.0	\$ 31.6	\$ 29.3	\$ 29.3

(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 \$1.0 billion and \$1.1 billion at March 31, 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 insured by U.S. government agencies and PCI loans, was 57% at March 31, 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 62% at March 31, 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 12.

Geographic composition of residential real estate loans

For information on the geographic composition of the Firm’s residential real estate loans, see Note 12.

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, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. At March 31, 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 \$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 March 31, 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 months ended March 31, 2017 and 2016, see Note 12.

Modified residential real estate loans

(in millions)	March 31, 2017		December 31, 2016	
	Retained loans	Non-accrual retained loans ^(d)	Retained loans	Non-accrual retained loans ^(d)
Modified residential real estate loans, excluding PCI loans^{(a)(b)}				
Home equity	\$ 2,265	\$ 1,120	\$ 2,264	\$ 1,116
Residential mortgage	5,918	1,703	6,032	1,755
Total modified residential real estate loans, excluding PCI loans	\$ 8,183	\$ 2,823	\$ 8,296	\$ 2,871
Modified PCI loans^(c)				
Home equity	\$ 2,419	NA	\$ 2,447	NA
Prime mortgage	4,904	NA	5,052	NA
Subprime mortgage	2,890	NA	2,951	NA
Option ARMs	9,031	NA	9,295	NA
Total modified PCI loans	\$ 19,244	NA	\$ 19,745	NA

(a) Amounts represent the carrying value of modified residential real estate loans.

(b) At March 31, 2017, and December 31, 2016, \$3.8 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 in securitization transactions with Ginnie Mae, see Note 14.

(c) Amounts represent the unpaid principal balance of modified PCI loans.

(d) At both March 31, 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 12.

Nonperforming assets

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

Nonperforming assets^(a)

(in millions)	March 31, 2017	December 31, 2016
Nonaccrual loans^(b)		
Residential real estate ^(c)	\$ 3,961	\$ 4,154
Other consumer ^(c)	588	666
Total nonaccrual loans	4,549	4,820
Assets acquired in loan satisfactions		
Real estate owned	267	292
Other	52	57
Total assets acquired in loan satisfactions	319	349
Total nonperforming assets	\$ 4,868	\$ 5,169

- (a) At March 31, 2017, and December 31, 2016, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$4.5 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 \$234 million and \$263 million, respectively, that are 90 or more days past due; and (3) REO insured by U.S. government agencies of \$121 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.

Nonaccrual loans in the residential real estate portfolio decreased to \$4.0 billion at March 31, 2017 from \$4.2 billion at December 31, 2016, of which 28% and 29% were greater than 150 days past due, respectively. 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 March 31, 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 12.

Nonaccrual loans: The following table presents changes in consumer, excluding credit card, nonaccrual loans for the three months ended March 31, 2017 and 2016.

Nonaccrual loan activity

Three months ended March 31, (in millions)	2017	2016
Beginning balance	\$ 4,820	\$ 5,413
Additions	877	903
Reductions:		
Principal payments and other ^(a)	447	342
Charge-offs	232	195
Returned to performing status	388	442
Foreclosures and other liquidations	81	112
Total reductions	1,148	1,091
Net changes	(271)	(188)
Ending balance	\$ 4,549	\$ 5,225

(a) Other reductions includes loan sales.

Credit card

Total credit card loans decreased from December 31, 2016 due to seasonality. The March 31, 2017 30+ day delinquency rate increased to 1.66% from 1.61% at December 31, 2016, but remains near record lows. For the three months ended March 31, 2017 and 2016, the net charge-off rates were 2.94% and 2.62%, respectively. The credit card portfolio continues to reflect a largely well-seasoned, rewards-based portfolio that has good U.S. geographic diversification. New originations continue to grow as a percentage of the total portfolio in line with the Firm's credit parameters; these originations have generated higher loss rates, as anticipated, than the more seasoned portion of the portfolio, given the higher mix of near-prime accounts being originated. 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 12.

Modifications of credit card loans

At both March 31, 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 12.

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 three months ended March 31, 2017, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. See industry discussion on pages 48-50 for further information. Growth in retained loans was largely driven within commercial real estate in multifamily. 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 and Corporate, and excludes all exposure managed by CCB.

Wholesale credit portfolio

(in millions)	Credit exposure		Nonperforming ^(c)	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Loans retained	\$ 386,370	\$ 383,790	\$ 1,571	\$ 1,954
Loans held-for-sale	5,430	2,285	109	109
Loans at fair value	2,103	2,230	—	—
Loans	393,903	388,305	1,680	2,063
Derivative receivables	56,063	64,078	179	223
Receivables from customers and other ^(a)	21,345	17,440	—	—
Total wholesale credit-related assets	471,311	469,823	1,859	2,286
Lending-related commitments	364,520	368,014	882	506
Total wholesale credit exposure	\$ 835,831	\$ 837,837	\$ 2,741	\$ 2,792
Credit derivatives used in credit portfolio management activities ^(b)	\$ (21,575)	\$ (22,114)	\$ —	\$ —
Liquid securities and other cash collateral held against derivatives	(20,361)	(22,705)	NA	NA

- (a) Receivables from customers and other include \$21.3 billion and \$17.3 billion of margin loans at March 31, 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 52, and Note 4.
- (c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of March 31, 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

March 31, 2017 (in millions, except ratios)	Maturity profile ^(d)				Ratings profile			Total % of IG
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment- grade	Noninvestment- grade	Total	
					AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below		
Loans retained	\$ 116,770	\$ 169,652	\$ 99,948	\$ 386,370	\$ 293,035	\$ 93,335	\$ 386,370	76%
Derivative receivables				56,063			56,063	
Less: Liquid securities and other cash collateral held against derivatives				(20,361)			(20,361)	
Total derivative receivables, net of all collateral	9,697	8,110	17,895	35,702	27,362	8,340	35,702	77
Lending-related commitments	86,061	269,878	8,581	364,520	262,385	102,135	364,520	72
Subtotal	212,528	447,640	126,424	786,592	582,782	203,810	786,592	74
Loans held-for-sale and loans at fair value ^(a)				7,533			7,533	
Receivables from customers and other				21,345			21,345	
Total exposure - net of liquid securities and other cash collateral held against derivatives				\$ 815,470			\$ 815,470	
Credit derivatives used in credit portfolio management activities ^{(b)(c)}	\$ (1,182)	\$ (11,388)	\$ (9,005)	\$ (21,575)	\$ (18,538)	\$ (3,037)	\$ (21,575)	86%

December 31, 2016 (in millions, except ratios)	Maturity profile ^(d)				Ratings profile			Total % of IG
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment- grade	Noninvestment- grade	Total	
					AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below		
Loans retained	\$ 117,238	\$ 167,235	\$ 99,317	\$ 383,790	\$ 289,923	\$ 93,867	\$ 383,790	76%
Derivative receivables				64,078			64,078	
Less: Liquid securities and other cash collateral held against derivatives				(22,705)			(22,705)	
Total derivative receivables, net of all collateral	14,019	8,510	18,844	41,373	33,081	8,292	41,373	80
Lending-related commitments	88,399	271,825	7,790	368,014	269,820	98,194	368,014	73
Subtotal	219,656	447,570	125,951	793,177	592,824	200,353	793,177	75
Loans held-for-sale and loans at fair value ^(a)				4,515			4,515	
Receivables from customers and other				17,440			17,440	
Total exposure - net of liquid securities and other cash collateral held against derivatives				\$ 815,132			\$ 815,132	
Credit derivatives used in credit portfolio management activities ^{(b)(c)}	\$ (1,354)	\$ (16,537)	\$ (4,223)	\$ (22,114)	\$ (18,710)	\$ (3,404)	\$ (22,114)	85%

(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 March 31, 2017, may become payable prior to maturity based on their cash flow profile or changes in market conditions.

Wholesale credit exposure – industry exposures

The Firm focuses on the management and diversification of its industry exposures, and it 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 \$18.9 billion at March 31, 2017, compared with \$19.8 billion at December 31, 2016.

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 holding company's primary business activity. 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 March 31, 2017, and December 31, 2016. For additional information on industry concentrations, see Note 5 of JPMorgan Chase's 2016 Annual Report.

Wholesale credit exposure – industries^(a)

As of or for the three months ended	Noninvestment-grade					Selected metrics			
	Credit exposure ^(e)	Investment - grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/(recoveries)	Credit derivative hedges ^(f)	Liquid securities and other cash collateral held against derivative receivables
March 31, 2017									
(in millions)									
Real Estate	\$ 135,040	\$ 106,175	\$ 27,672	\$ 1,026	\$ 167	\$ 205	\$ (1)	\$ (45)	\$ (5)
Consumer & Retail	85,755	55,951	27,956	1,644	204	64	1	(378)	(27)
Technology, Media & Telecommunications	61,851	39,152	21,445	1,205	49	11	–	(394)	(46)
Industrials	54,435	35,060	17,964	1,219	192	136	6	(398)	(52)
Healthcare	49,289	39,142	9,129	977	41	132	–	(285)	(239)
Banks & Finance Cos	45,907	32,006	13,565	332	4	30	(1)	(1,277)	(6,026)
Oil & Gas	42,942	18,249	15,980	7,333	1,380	8	–	(1,357)	(27)
Utilities	30,865	23,733	6,686	405	41	–	11	(297)	(63)
Asset Managers	28,641	25,262	3,378	1	–	13	–	(4,856)	(4,985)
State & Municipal Govt ^(b)	28,107	27,435	642	1	29	6	–	(130)	(111)
Central Govt	19,421	19,109	312	–	–	2	–	(10,707)	(4,003)
Transportation	17,510	11,171	5,883	335	121	22	1	(91)	(192)
Automotive	17,193	9,525	7,531	136	1	46	–	(342)	(20)
Chemicals & Plastics	15,096	11,059	3,926	82	29	5	–	(30)	(6)
Metals & Mining	13,971	5,505	7,091	1,375	–	–	(13)	(440)	(16)
Insurance	12,404	9,836	2,465	–	103	10	–	(273)	(1,894)
Financial Markets Infrastructure	6,923	5,808	1,115	–	–	–	–	–	(377)
Securities Firms	3,794	1,218	2,568	8	–	–	–	(275)	(666)
All other ^(c)	137,809	125,738	11,619	181	271	981	(31)	–	(1,606)
Subtotal	\$ 806,953	\$ 601,134	\$ 186,927	\$ 16,260	\$ 2,632	\$ 1,671	\$ (27)	\$ (21,575)	\$ (20,361)
Loans held-for-sale and loans at fair value	7,533								
Receivables from customers and other	21,345								
Total^(d)	\$ 835,831								

(continued from previous page)

As of or for the year ended December 31, 2016 (in millions)	Noninvestment-grade					Selected metrics			
	Credit exposure ^(e)	Investment - grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/(recoveries)	Credit derivative hedges ^(f)	Liquid securities and other cash collateral held against derivative receivables
Real Estate	\$ 134,287	\$ 104,869	\$ 28,281	\$ 937	\$ 200	\$ 206	\$ (7)	\$ (54)	\$ (11)
Consumer & Retail	84,804	54,730	28,255	1,571	248	75	24	(424)	(69)
Technology, Media & Telecommunications	63,324	39,998	21,751	1,559	16	9	2	(589)	(30)
Industrials	55,733	36,710	17,854	1,033	136	128	3	(434)	(40)
Healthcare	49,445	39,244	9,279	882	40	86	37	(286)	(246)
Banks & Finance Cos	48,393	35,385	12,560	438	10	21	(2)	(1,336)	(7,337)
Oil & Gas	40,367	18,629	12,274	8,069	1,395	31	233	(1,532)	(18)
Utilities	29,672	24,203	4,959	424	86	8	—	(306)	39
Asset Managers	33,201	29,194	4,006	1	—	17	—	—	(5,737)
State & Municipal Govt ^(b)	28,263	27,603	624	6	30	107	(1)	(130)	398
Central Govt	20,408	20,123	276	9	—	4	—	(11,691)	(4,183)
Transportation	19,096	12,178	6,421	444	53	9	10	(93)	(188)
Automotive	16,736	9,235	7,299	201	1	7	—	(401)	(14)
Chemicals & Plastics	15,043	10,405	4,452	156	30	3	—	(35)	(3)
Metals & Mining	13,419	5,523	6,744	1,133	19	—	36	(621)	(62)
Insurance	13,510	10,918	2,459	—	133	9	—	(275)	(2,538)
Financial Markets Infrastructure	8,732	7,980	752	—	—	—	—	—	(390)
Securities Firms	4,211	1,812	2,399	—	—	—	—	(273)	(491)
All other ^(c)	137,238	124,661	11,988	303	286	598	6	(3,634)	(1,785)
Subtotal	\$ 815,882	\$ 613,400	\$ 182,633	\$ 17,166	\$ 2,683	\$ 1,318	\$ 341	\$ (22,114)	\$ (22,705)
Loans held-for-sale and loans at fair value	4,515								
Receivables from customers and other	17,440								
Total^(d)	\$ 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 March 31, 2017, not actual rankings of such exposures at December 31, 2016.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at March 31, 2017, and December 31, 2016, noted above, the Firm held: \$8.2 billion and \$9.1 billion, respectively, of trading securities; \$32.2 billion and \$31.6 billion, respectively, of AFS securities; and \$14.5 billion of HTM securities for both periods, issued by U.S. state and municipal governments. For further information, see Note 2 and Note 10.

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

(d) Excludes cash placed with banks of \$451.9 billion and \$380.2 billion, at March 31, 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.

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 16.2% and 16.0% of the Firm's total wholesale exposure as of March 31, 2017 and December 31, 2016, respectively. Exposure to this industry increased by \$753 million or 1%, during the three months ended March 31, 2017, to \$135.0 billion primarily driven by increases in Commercial Banking multifamily. The investment-grade percentage of the portfolio increased to 79% as of March 31, 2017, up from 78% as of December 31, 2016. As of March 31, 2017, \$108.1 billion of the exposure was drawn, of which 84% was investment-grade, and 84% of the \$135.0 billion exposure was secured. As of March 31, 2017, \$82.1 billion of the \$135.0 billion was multifamily, largely in California; of the \$82.1 billion, 83% was investment-grade and 98% was secured. For further information on commercial real estate loans, see Note 14 of JPMorgan Chase's 2016 Annual Report.

Oil & Gas and Natural Gas Pipelines

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

(in millions, except ratios)	March 31, 2017				
	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn ^(d)
Exploration & Production ("E&P") and Oilfield Services ^(a)	\$ 20,487	\$ 600	\$ 21,087	27%	33%
Other Oil & Gas ^(b)	21,258	597	21,855	57	25
Total Oil & Gas	41,745	1,197	42,942	42	29
Natural Gas Pipelines ^(c)	4,893	107	5,000	58	24
Total Oil & Gas and Natural Gas Pipelines	\$ 46,638	\$ 1,304	\$ 47,942	44	28

(in millions, except ratios)	December 31, 2016				
	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn ^(d)
E&P and Oilfield Services ^(a)	\$ 20,971	\$ 1,256	\$ 22,227	27%	35%
Other Oil & Gas ^(b)	17,518	622	18,140	70	31
Total Oil & Gas	38,489	1,878	40,367	46	33
Natural Gas Pipelines ^(c)	4,253	106	4,359	66	30
Total Oil & Gas and Natural Gas Pipelines	\$ 42,742	\$ 1,984	\$ 44,726	48	33

(a) Noninvestment-grade exposure to E&P and Oilfield Services is largely secured.

(b) Other Oil & 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 5.7% and 5.3% of the Firm's total wholesale exposure as of March 31, 2017 and December 31, 2016, respectively. Exposure to these industries increased by \$3.2 billion during the three months ended March 31, 2017, to \$47.9 billion; of the \$47.9 billion, approximately \$13.5 billion was drawn as of March 31, 2017. As of March 31, 2017, approximately \$21.1 billion of the exposure was investment grade, of which \$4.9 billion was drawn, and approximately \$26.8 billion of the exposure was noninvestment-grade, of which \$8.6 billion was drawn; 18% 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 \$14.6 billion as of March 31, 2017; 46% 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 \$4.8 billion as of March 31, 2017. While the overall trends and sentiment have been stabilizing, the Firm continues to actively monitor and manage its exposure to these portfolios.

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 12.

The following table presents the change in the nonaccrual loan portfolio for the three months ended March 31, 2017 and 2016.

Wholesale nonaccrual loan activity^(a)

Three months ended March 31, (in millions)	2017	2016
Beginning balance	\$ 2,063	\$ 1,016
Additions	290	1,412
Reductions:		
Paydowns and other	481	104
Gross charge-offs	24	69
Returned to performing status	103	21
Sales	65	24
Total reductions	673	218
Net changes	(383)	1,194
Ending balance	\$ 1,680	\$ 2,210

(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 months ended March 31, 2017 and 2016. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs/(recoveries)

(in millions, except ratios)	Three months ended March 31,	
	2017	2016
Loans - reported		
Average loans retained	\$ 382,367	\$ 360,306
Gross charge-offs	26	69
Gross recoveries	(53)	(9)
Net charge-offs/(recoveries)	(27)	60
Net charge-off/(recovery) rate	(0.03)%	0.07%

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.

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, the Firm has established a "loan-equivalent" amount for each commitment. The loan-equivalent amount of the Firm's lending-related commitments was \$200.6 billion and \$204.6 billion as of March 31, 2017, and December 31, 2016, respectively.

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

(in millions)	Derivative receivables	
	March 31, 2017	December 31, 2016
Interest rate	\$ 26,429	\$ 28,302
Credit derivatives	888	1,294
Foreign exchange	16,774	23,271
Equity	5,841	4,939
Commodity	6,131	6,272
Total, net of cash collateral	56,063	64,078
Liquid securities and other cash collateral held against derivative receivables ^(a)	(20,361)	(22,705)
Total, net of collateral	\$ 35,702	\$ 41,373

(a) Includes collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivables reported on the Consolidated balance sheets were \$56.1 billion and \$64.1 billion at March 31, 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 \$20.4 billion and \$22.7 billion at March 31, 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 March 31, 2017 from December 31, 2016, is predominantly related to client-driven market-making activities in CIB Markets, driven by maturities and market movements, which reduced foreign exchange and interest rate receivables.

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

Rating equivalent (in millions, except ratios)	March 31, 2017		December 31, 2016	
	Exposure net of collateral	% of exposure net of collateral	Exposure net of collateral	% of exposure net of collateral
AAA/Aaa to AA-/Aa3	\$ 9,154	26%	\$ 11,449	28%
A+/A1 to A-/A3	6,979	20	8,505	20
BBB+/Baa1 to BBB-/Baa3	11,229	31	13,127	32
BB+/Ba1 to B-/B3	7,559	21	7,308	18
CCC+/Caa1 and below	781	2	984	2
Total	\$ 35,702	100%	\$ 41,373	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 March 31, 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.

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.

Credit derivatives used in credit portfolio management activities

(in millions)	Notional amount of protection purchased and sold ^(a)	
	March 31, 2017	December 31, 2016
Credit derivatives used to manage:		
Loans and lending-related commitments	\$ 1,846	\$ 2,430
Derivative receivables	19,729	19,684
Credit derivatives used in credit portfolio management activities	\$ 21,575	\$ 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-Q, and Note 6 of JPMorgan Chase's 2016 Annual Report.

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 67-69 and Note 13 of this Form 10-Q, and Critical Accounting Estimates Used by the Firm on pages 132-134 and Note 15 of JPMorgan 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 the Audit Committee. As of

March 31, 2017, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The consumer allowance for loan losses decreased from December 31, 2016, reflecting the utilization of the allowance for loan losses in connection with the transfer of the student loan portfolio to held-for-sale. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 41-45 and Note 12.

The wholesale allowance for credit losses decreased from December 31, 2016, primarily driven by a net reduction to the allowance in the Oil & Gas portfolio. For additional information on the wholesale portfolio, see Wholesale Credit Portfolio on pages 46-52 and Note 12.

Summary of changes in the allowance for credit losses

Three months ended March 31, (in millions, except ratios)	2017				2016			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses								
Beginning balance at January 1,	\$ 5,198	\$ 4,034	\$ 4,544	\$ 13,776	\$ 5,806	\$ 3,434	\$ 4,315	\$ 13,555
Gross charge-offs	847	1,086	26	1,959	365	923	69	1,357
Gross recoveries	(159)	(93)	(53)	(305)	(145)	(93)	(9)	(247)
Net charge-offs/(recoveries)^(a)	688	993	(27)	1,654	220	830	60	1,110
Write-offs of PCI loans ^(b)	24	—	—	24	47	—	—	47
Provision for loan losses	442	993	(119)	1,316	221	830	545	1,596
Other	(2)	—	1	(1)	—	—	—	—
Ending balance at March 31,	\$ 4,926	\$ 4,034	\$ 4,453	\$ 13,413	\$ 5,760	\$ 3,434	\$ 4,800	\$ 13,994
Impairment methodology								
Asset-specific ^(c)	\$ 300	\$ 373	\$ 249	\$ 922	\$ 371	\$ 427	\$ 565	\$ 1,363
Formula-based	2,339	3,661	4,204	10,204	2,694	3,007	4,235	9,936
PCI	2,287	—	—	2,287	2,695	—	—	2,695
Total allowance for loan losses	\$ 4,926	\$ 4,034	\$ 4,453	\$ 13,413	\$ 5,760	\$ 3,434	\$ 4,800	\$ 13,994
Allowance for lending-related commitments								
Beginning balance at January 1,	\$ 26	\$ —	\$ 1,052	\$ 1,078	\$ 14	\$ —	\$ 772	\$ 786
Provision for lending-related commitments	—	—	(1)	(1)	—	—	228	228
Other	—	—	—	—	—	—	—	—
Ending balance at March 31,	\$ 26	\$ —	\$ 1,051	\$ 1,077	\$ 14	\$ —	\$ 1,000	\$ 1,014
Impairment methodology								
Asset-specific	\$ —	\$ —	\$ 228	\$ 228	\$ —	\$ —	\$ 192	\$ 192
Formula-based	26	—	823	849	14	—	808	822
Total allowance for lending-related commitments^(d)	\$ 26	\$ —	\$ 1,051	\$ 1,077	\$ 14	\$ —	\$ 1,000	\$ 1,014
Total allowance for credit losses	\$ 4,952	\$ 4,034	\$ 5,504	\$ 14,490	\$ 5,774	\$ 3,434	\$ 5,800	\$ 15,008
Memo:								
Retained loans, end of period	\$360,583	\$ 134,917	\$ 386,370	\$881,870	\$353,871	\$126,012	\$ 364,312	\$844,195
Retained loans, average	366,098	137,112	382,367	885,577	348,916	127,227	360,306	836,449
PCI loans, end of period	34,385	—	3	34,388	39,743	—	4	39,747
Credit ratios								
Allowance for loan losses to retained loans	1.37%	2.99%	1.15 %	1.52%	1.63%	2.73%	1.32%	1.66%
Allowance for loan losses to retained nonaccrual loans ^(e)	112	NM	283	225	112	NM	218	190
Allowance for loan losses to retained nonaccrual loans excluding credit card	112	NM	283	157	112	NM	218	143
Net charge-off/(recovery) rates ^(a)	0.76	2.94	(0.03)	0.76	0.25	2.62	0.07	0.53
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	0.81	2.99	1.15	1.31	0.98	2.73	1.32	1.40
Allowance for loan losses to retained nonaccrual loans ^(e)	60	NM	283	187	59	NM	218	153
Allowance for loan losses to retained nonaccrual loans excluding credit card	60	NM	283	119	59	NM	218	107
Net charge-off/(recovery) rates ^(a)	0.84%	2.94%	(0.03)%	0.79%	0.29%	2.62%	0.07%	0.56%

Note 1: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures.

(a) For the first quarter of 2017, excluding net charge-offs of \$467 million related to the student loan portfolio write-down, the net charge-off rate for Consumer, excluding credit card would have been 0.24%; total Firm would have been 0.54%; Consumer, excluding credit card and PCI loans would have been 0.27%; and total Firm, excluding PCI would have been 0.57%. For additional information refer to CCB segment results on page 17.

(b) 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).

(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.

Provision for credit losses

For the three months ended March 31, 2017, the provision for credit losses was \$1.3 billion compared with \$1.8 billion in the prior year period.

The total consumer provision for credit losses for the three months ended March 31, 2017 increased, driven by \$218 million related to the transfer of the student loan portfolio to held-for-sale, and \$163 million higher net charge-offs in the credit card portfolio, which were in line with expectations.

The wholesale provision for credit losses for the three months ended March 31, 2017 was a benefit, primarily driven by releases related to the Oil & Gas portfolio, compared to an expense in the prior year. The prior year reflected increases in the wholesale allowance due to the impact of downgrades in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios.

	Three months ended March 31,					
	Provision for loan losses		Provision for lending-related commitments		Total provision for credit losses	
(in millions)	2017	2016	2017	2016	2017	2016
Consumer, excluding credit card	\$ 442	\$ 221	\$ –	\$ –	\$ 442	\$ 221
Credit card	993	830	–	–	993	830
Total consumer	1,435	1,051	–	–	1,435	1,051
Wholesale	(119)	545	(1)	228	(120)	773
Total	\$ 1,316	\$ 1,596	\$ (1)	\$ 228	\$ 1,315	\$ 1,824

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 direct country exposures in the 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 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 of JPMorgan Chase's 2016 Annual Report.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of March 31, 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.

The decrease in exposure to Germany and Japan since December 31, 2016 largely reflects lower 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

(in billions)	March 31, 2017			
	Lending and deposits ^(a)	Trading and investing ^{(b)(c)}	Other ^(d)	Total exposure
Germany	\$ 35.6	\$ 14.2	\$ 0.2	\$ 50.0
United Kingdom	28.2	16.0	0.6	44.8
France	12.1	9.2	0.3	21.6
Canada	16.0	2.1	0.1	18.2
China	8.9	4.8	0.8	14.5
Japan	9.1	4.6	0.1	13.8
Switzerland	7.2	1.0	4.5	12.7
Australia	7.3	4.7	–	12.0
Netherlands	6.1	2.7	1.0	9.8
India	3.9	5.3	0.6	9.8
Brazil	4.6	4.5	–	9.1
Luxembourg	7.2	0.5	–	7.7
Korea	3.7	1.5	0.7	5.9
Hong Kong	1.9	1.3	1.9	5.1
Italy	3.4	1.6	–	5.0
Singapore	2.8	1.3	0.8	4.9
Spain	4.6	0.2	–	4.8
Saudi Arabia	3.8	0.9	–	4.7
Mexico	2.9	1.3	–	4.2
Norway	1.2	2.6	–	3.8

- (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 tranching 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.

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 of JPMorgan Chase's 2016 Annual Report.

LCR and NSFR

The LCR rule requires the Firm to measure the amount of its HQLA in relation to estimated net cash outflows within a 30-day period during an acute stress event. The LCR was required to be a minimum of 100% commencing January 1, 2017. At March 31, 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. Starting with the second quarter of 2017, the Firm will be 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 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 December 31, 2016, 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 cash and certain unencumbered high quality liquid assets as defined in the final rule.

As of March 31, 2017, the Firm's HQLA was \$528 billion, compared with \$524 billion as of December 31, 2016. 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 March 31, 2017.

(in billions)	March 31, 2017	
HQLA		
Eligible cash ^(a)	\$	380
Eligible securities ^(b)		148
Total HQLA^(c)	\$	528

(a) Cash on deposit at central 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.

As of March 31, 2017, in addition to HQLA reported above, the Firm had approximately \$283 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. 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 March 31, 2017, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately \$236 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.

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 (\$896.0 billion at March 31, 2017), is funded with a portion of the Firm's deposits (\$1,423.0 billion at March 31, 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 deposit balances as of March 31, 2017, and December 31, 2016, and the average deposit balances for the three months ended March 31, 2017 and 2016, respectively.

Deposits (in millions)	March 31, 2017	December 31, 2016	Three months ended March 31,	
			Average	
			2017	2016
Consumer & Community Banking	\$ 646,962	\$ 618,337	\$ 622,915	\$ 562,284
Corporate & Investment Bank	439,939	412,434	427,466	392,622
Commercial Banking	173,499	179,532	176,624	171,121
Asset & Wealth Management	157,295	161,577	158,810	150,616
Corporate	5,304	3,299	5,748	6,625
Total Firm	\$ 1,422,999	\$ 1,375,179	\$ 1,391,563	\$ 1,283,268

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 March 31, 2017, the Firm's loans-to-deposits ratio was 63%, compared with 65% at December 31, 2016. Total deposits for the Firm were \$1,423.0 billion as of March 31, 2017, compared with \$1,375.2 billion at December 31, 2016 (62% and 61% of total liabilities at March 31, 2017, and December 31, 2016, respectively). Deposits increased due to both higher consumer and wholesale deposits. The higher consumer deposits reflected the continuation of strong growth from existing and new customers, low attrition rates and seasonal factors. The higher wholesale deposits were driven by growth in client activity in CIB's Securities Services business, partially offset by the impact of seasonality in CB and lower balances in AWM driven by market improvement, which resulted in net inflows to investment products.

The Firm believes average deposit balances are generally more representative of deposit trends. The increase in average deposits for the three months ended March 31, 2017, compared with the three months ended March 31, 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 16-30 and pages 9-10, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of March 31, 2017, and December 31, 2016, and average balances for the three months ended March 31, 2017 and 2016, respectively. For additional information, see the Consolidated Balance Sheets Analysis on pages 9-10 and Note 11.

Sources of funds (excluding deposits) (in millions)	March 31, 2017	December 31, 2016	Three months ended March 31,	
			Average	
			2017	2016
Commercial paper	\$ 14,908	\$ 11,738	\$ 13,364	\$ 17,537
Obligations of Firm-administered multi-seller conduits^(a)	\$ 3,089	\$ 2,719	\$ 4,373	\$ 6,501
Other borrowed funds	\$ 24,342	\$ 22,705	\$ 23,157	\$ 20,231
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase ^(b)	\$ 167,041	\$ 149,826	\$ 172,765	\$ 149,700
Securities loaned ^{(c)(d)}	11,846	12,137	13,195	15,059
Total securities loaned or sold under agreements to repurchase^{(d)(e)}	\$ 178,887	\$ 161,963	\$ 185,960	\$ 164,759
Senior notes	\$ 147,321	\$ 151,042	\$ 149,403	\$ 149,069
Trust preferred securities	2,342	2,345	2,344	3,971
Subordinated debt	20,857	21,940	21,172	25,365
Structured notes	41,484	37,292	38,904	33,552
Total long-term unsecured funding	\$ 212,004	\$ 212,619	\$ 211,823	\$ 211,957
Credit card securitization ^(a)	\$ 28,742	\$ 31,181	\$ 29,431	\$ 27,697
Other securitizations ^{(a)(f)}	1,472	1,527	1,524	1,757
FHLB advances	74,316	79,519	77,280	71,241
Other long-term secured funding ^(g)	3,172	3,107	3,121	4,962
Total long-term secured funding	\$ 107,702	\$ 115,334	\$ 111,356	\$ 105,657
Preferred stock^(h)	\$ 26,068	\$ 26,068	\$ 26,068	\$ 26,068
Common stockholders' equity^(h)	\$ 229,795	\$ 228,122	\$ 227,703	\$ 221,561

(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 \$2.2 billion and \$1.8 billion as of March 31, 2017, and December 31, 2016, respectively, and average balances of \$1.5 billion and \$4.4 billion for the three months ended March 31, 2017 and 2016, respectively.

(c) Excludes long-term securities loaned of \$1.3 billion and \$1.2 billion as of March 31, 2017, and December 31, 2016, respectively, and average balances of \$1.3 billion for each of the three months ended March 31, 2017 and March 31, 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'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 32-39 and the Consolidated statements of changes in stockholders' equity on page 76; and Note 22 and Note 23 of JPMorgan 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 balance of securities loaned or sold under agreements to repurchase at March 31, 2017, from December 31, 2016, was predominantly due to higher financing of client-driven market-making activities in CIB. The increase in the average balance of securities loaned or sold under agreements to repurchase for the three months ended March 31, 2017, compared with March 31, 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.

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 months ended March 31, 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

(in millions)	Three months ended March 31,	
	2017	2016
Issuance		
Senior notes issued in the U.S. market	\$ 6,465	\$ 7,219
Senior notes issued in non-U.S. markets	–	–
Total senior notes	6,465	7,219
Subordinated debt	–	–
Structured notes	8,434	8,333
Total long-term unsecured funding - issuance	\$ 14,899	\$ 15,552
Maturities/redemptions		
Senior notes	\$ 10,427	\$ 9,811
Trust preferred securities	–	–
Subordinated debt	995	2
Structured notes	5,330	4,104
Total long-term unsecured funding - maturities/redemptions	\$ 16,752	\$ 13,917

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 months ended March 31, 2017 and 2016, respectively.

Long-term secured funding

(in millions)	Three months ended March 31,			
	Issuance		Maturities/Redemptions	
	2017	2016	2017	2016
Credit card securitization	\$ 1,545	\$ –	\$ 3,990	\$ 425
Other securitizations ^(a)	–	–	55	58
FHLB advances	–	–	5,202	2,051
Other long-term secured funding ^(b)	103	90	44	43
Total long-term secured funding	\$ 1,648	\$ 90	\$ 9,291	\$ 2,577

(a) Other securitizations includes securitizations of student loans.

(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 of JPMorgan Chase's 2016 Annual Report.

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 12, 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 March 31, 2017, were as follows.

March 31, 2017	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's	A3	P-2	Stable	Aa3	P-1	Stable	A1	P-1	Stable
Standard & Poor's	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	AA-	F1+	Stable	AA-	F1+	Stable

On February 22, 2017, Moody's published its updated rating methodologies for securities firms. As a result of this methodology change, J.P. Morgan Securities LLC's long-term issuer rating was downgraded by one notch from Aa3 to A1; the short-term issuer rating was unchanged and the outlook 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. 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.

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 of JPMorgan 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, in addition to VaR, to capture and manage its market risk positions.

The Firm uses alternative methods to capture and measure those risk parameters that are not otherwise captured in VaR, including economic-value stress testing and nonstatistical measures. 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 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>).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

(in millions)	Three months ended,								
	March 31, 2017			December 31, 2016			March 31, 2016		
	Avg.	Min	Max	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type									
Fixed income	\$ 28	\$ 20	\$ 40	\$ 40	\$ 33	\$ 49	\$ 46	\$ 36	\$ 64
Foreign exchange	10	6	16	12	9	16	9	7	14
Equities	11	8	14	10	7	14	22	14	32
Commodities and other	8	5	10	9	7	11	9	8	11
Diversification benefit to CIB trading VaR	(34) ^(a)	NM ^(b)	NM ^(b)	(36) ^(a)	NM ^(b)	NM ^(b)	(32) ^(a)	NM ^(b)	NM ^(b)
CIB trading VaR	23	14	34	35	28	41	54	39	79
Credit portfolio VaR	10	9	12	12	10	16	12	10	14
Diversification benefit to CIB VaR	(8) ^(a)	NM ^(b)	NM ^(b)	(8) ^(a)	NM ^(b)	NM ^(b)	(11) ^(a)	NM ^(b)	NM ^(b)
CIB VaR	25	17	38	39	32	45	55	39	81
CIB VaR	2	1	3	3	2	4	4	3	6
Corporate VaR	2	2	3	3	3	5	7	5	8
AWM VaR	—	—	—	—	—	—	3	3	4
Diversification benefit to other VaR	(1) ^(a)	NM ^(b)	NM ^(b)	(1) ^(a)	NM ^(b)	NM ^(b)	(4) ^(a)	NM ^(b)	NM ^(b)
Other VaR	3	3	4	5	4	6	10	8	11
Diversification benefit to CIB and other VaR	(3) ^(a)	NM ^(b)	NM ^(b)	(4) ^(a)	NM ^(b)	NM ^(b)	(11) ^(a)	NM ^(b)	NM ^(b)
Total VaR	\$ 25	\$ 17	\$ 37	\$ 40	\$ 33	\$ 46	\$ 54	\$ 40	\$ 78

(a) Average portfolio VaR and period-end portfolio VaR were 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

As presented in the table above, average total VaR decreased by \$15 million for the three months ended March 31, 2017 as compared with the prior quarter. The reduction in average total VaR from the previous quarter is primarily in the Fixed income risk type reflecting reduced volatility in the one-year historical look-back period and refinements in proxy time series inputs to certain VaR models.

As noted above, in the first quarter of 2017, the Firm refined the historical proxy time series inputs to certain VaR models. These refinements are intended to more appropriately reflect the risk exposure from certain asset-backed products. In the absence of this refinement, the average total VaR for the three months ended March 31, 2017 would have been higher by \$3 million and each of the components would have been higher by the amounts reported in the following table:

(in millions)	Amount by which reported VaR would have been higher for the three months ended March 31, 2017
CIB fixed income VaR	\$ 5
CIB trading VaR	4
CIB VaR	3

Year over Year results

Average total VaR decreased by \$29 million for the three months ended March 31, 2017, compared with the same period in the prior year. The reduction in average total VaR is primarily in the Fixed income and Equities risk types reflecting reduced volatility in the one-year historical look-back period and a reduction of the risk exposure in the Equities risk type alongside refinements made to VaR models for certain asset backed products and changes in scope of positions included in risk management VaR.

As noted above, 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 March 31, 2017 would have been higher by \$6 million and each of the components would have been higher by the amounts reported in the following table:

(in millions)	Amount by which reported VaR would have been higher for the three months ended March 31, 2017
CIB fixed income VaR	\$ 5
CIB equities VaR	3
CIB trading VaR	5
CIB VaR	6
Corporate VaR	6
AWM VaR	6
Other VaR	7

VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.

VaR back-testing

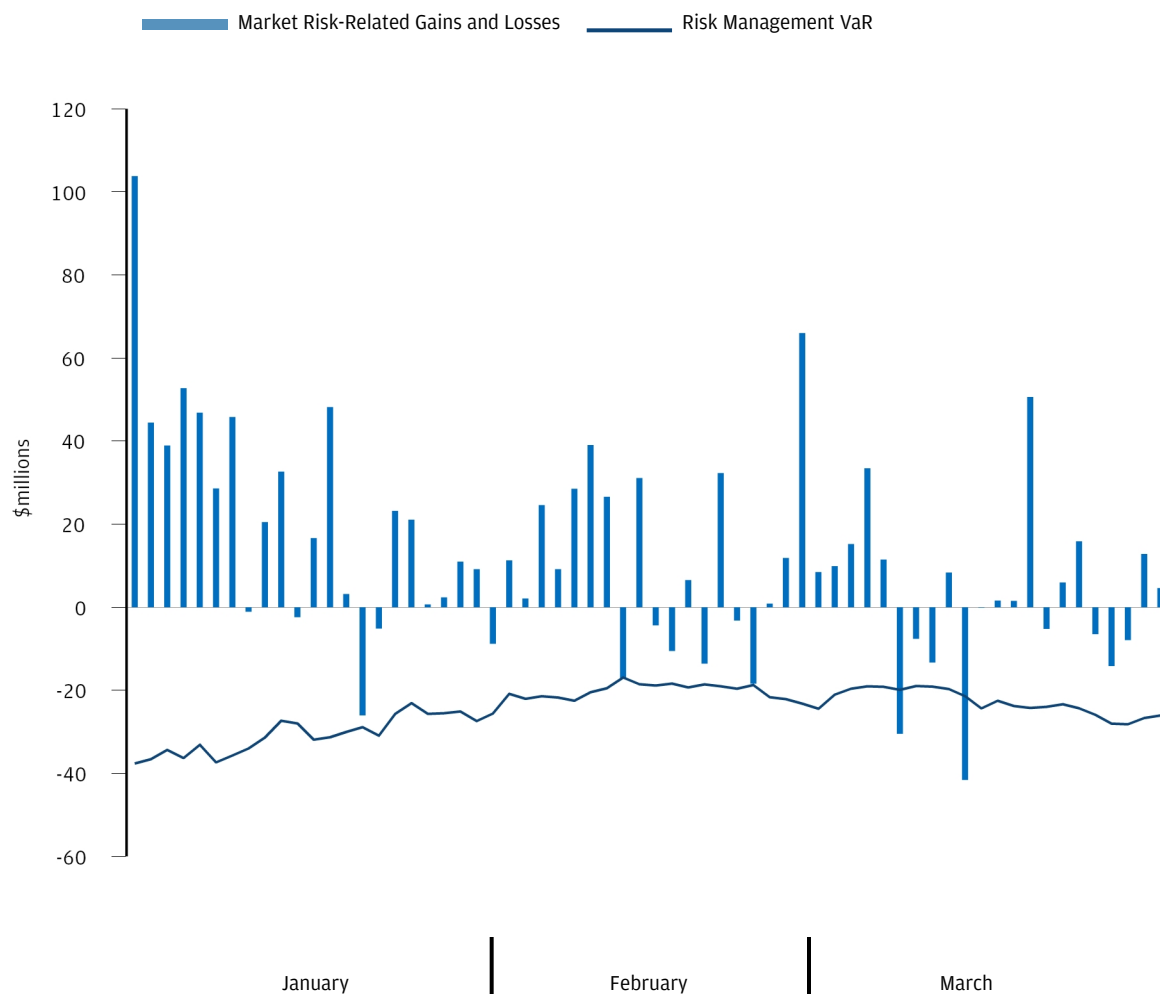
The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses actually recognized on market-risk related revenue.

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 three months ended March 31, 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 three months ended March 31, 2017, the Firm observed 3 VaR back-testing exceptions and posted gains on 44 of the 64 days.

Daily Market Risk-Related Gains and Losses vs. Risk Management VaR (1-day, 95% Confidence level)

Three months ended March 31, 2017



Earnings-at-risk

The VaR and sensitivity measures described above 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 of JPMorgan 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 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. The non-U.S. dollar sensitivities are not material to the Firm's earnings-at-risk at March 31, 2017 and December 31, 2016.

JPMorgan Chase's 12-month earnings-at-risk sensitivity profiles

U.S. dollar (in billions)	Instantaneous change in rates			
	+200bps	+100bps	-100bps	-200bps
March 31, 2017	\$ 3.8	\$ 2.3	NM ^(a)	NM ^(a)
December 31, 2016	\$ 4.0	\$ 2.4	NM ^(a)	NM ^(a)

(a) Given the current level of market interest rates, downward parallel 100 and 200 basis point earnings-at-risk scenarios are not considered to be meaningful.

The Firm's benefit to rising rates on U.S. dollar assets and liabilities is largely a result of reinvesting at higher yields and assets re-pricing 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.

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 March 31, 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.

Gain/(loss) (in millions)			March 31, 2017	December 31, 2016
Activity	Description	Sensitivity measure		
Investment activities				
Investment management activities	Consists of seed capital and related hedges; and fund co-investments	10% decline in market value	\$ (167)	\$ (166)
Other investments	Consists of private equity and other investments held at fair value	10% decline in market value	(359)	(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	1 basis point parallel tightening of cross currency basis	(8)	(7)
Non-USD LTD hedges FX exposure	Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges	10% depreciation of currency	(14)	(23)
Funding spread risk - derivatives	Impact of changes in the spread related to derivatives DVA/FVA	1 basis point parallel increase in spread	(4)	(4)
Funding spread risk - fair value option elected liabilities ^(a)	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.

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 of JPMorgan Chase's 2016 Annual Report; and see Allowance for credit losses on pages 53-55 and Note 13 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. 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 the Firm's modeled credit loss estimates as of March 31, 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 \$125 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 \$900 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 \$2.2 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 \$185 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 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.

March 31, 2017 (in billions, except ratios)	Total assets at fair value	Total level 3 assets
Trading-debt and equity instruments	\$ 346.4	\$ 7.7
Derivative receivables ^(a)	56.1	4.9
Trading assets	402.5	12.6
AFS securities	232.9	0.6
Loans	2.1	0.4
MSRs	6.1	6.1
Other	25.1	2.1
Total assets measured at fair value on a recurring basis	\$ 668.7	\$ 21.8
Total assets measured at fair value on a nonrecurring basis	7.0	0.5
Total assets measured at fair value	\$ 675.7	\$ 22.3
Total Firm assets	\$ 2,546.3	
Level 3 assets as a percentage of total Firm assets ^(a)		0.9%
Level 3 assets as a percentage of total Firm assets at fair value ^(a)		3.3%

(a) For purposes of table above, the derivative receivables total reflects the impact of netting adjustments; however, the \$4.9 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 March 31, 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 March 31, 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 15.

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 22 of this Form 10-Q, and Note 31 of JPMorgan Chase's 2016 Annual Report.

ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board (“FASB”) Standards Issued but not yet Adopted

Standard	Summary of guidance	Effects on financial statements
<p>Revenue recognition - revenue from contracts with customers</p> <p><i>Issued May 2014</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2018.^(a) 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. 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).
<p>Recognition and measurement of financial assets and financial liabilities</p> <p><i>Issued January 2016</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 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.
<p>Leases</p> <p><i>Issued February 2016</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2019.^(a) 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 of JPMorgan 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.
<p>Financial instruments - credit losses</p> <p><i>Issued June 2016</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2020.^(b) 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 expects that the new guidance will result in an increase in its allowance for credit losses due to several factors, including: <ol style="list-style-type: none"> 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 The nonaccretable difference on PCI loans will be recognized as an allowance, offset by an increase in the carrying value of the related loans 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.

FASB Standards Issued but not yet Adopted (continued)

Standard	Summary of guidance	Effects on financial statements
<p>Classification of certain cash receipts and cash payments in the statement of cash flows</p> <p><i>Issued August 2016</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2018.^(a) The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.
<p>Treatment of restricted cash on the statement of cash flows</p> <p><i>Issued November 2016</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2018.^(a) The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.
<p>Definition of a business</p> <p><i>Issued January 2017</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2018.^(a) 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.
<p>Goodwill</p> <p><i>Issued January 2017</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2020.^(a) 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.
<p>Presentation of net periodic pension cost and net periodic postretirement benefit cost</p> <p><i>Issued March 2017</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2018.^(a) The guidance will have no impact on the Firm's net income, but will result in the reclassification of amounts in the Firm's Consolidated statements of income from compensation expense to other line items.
<p>Premium amortization on purchased callable debt securities</p> <p><i>Issued March 2017</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2019.^(a) The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.

(a) Early adoption is permitted.

(b) Early adoption is permitted on January 1, 2019.

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 of JPMorgan 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-K for the 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.

JPMorgan Chase & Co.
Consolidated statements of income (unaudited)

(in millions, except per share data)	Three months ended March 31,	
	2017	2016
Revenue		
Investment banking fees	\$ 1,817	\$ 1,333
Principal transactions	3,582	2,679
Lending- and deposit-related fees	1,448	1,403
Asset management, administration and commissions	3,677	3,624
Securities gains/(losses)	(3)	51
Mortgage fees and related income	406	667
Card income	914	1,301
Other income	770	801
Noninterest revenue	12,611	11,859
Interest income	15,042	13,552
Interest expense	2,978	2,172
Net interest income	12,064	11,380
Total net revenue	24,675	23,239
Provision for credit losses	1,315	1,824
Noninterest expense		
Compensation expense	8,201	7,660
Occupancy expense	961	883
Technology, communications and equipment expense	1,828	1,618
Professional and outside services	1,543	1,548
Marketing	713	703
Other expense	1,773	1,425
Total noninterest expense	15,019	13,837
Income before income tax expense	8,341	7,578
Income tax expense	1,893	2,058
Net income	\$ 6,448	\$ 5,520
Net income applicable to common stockholders^(a)	\$ 5,975	\$ 5,046
Net income per common share data		
Basic earnings per share	\$ 1.66	\$ 1.36
Diluted earnings per share	1.65	1.35
Weighted-average basic shares^(a)	3,601.7	3,710.6
Weighted-average diluted shares^(a)	3,630.4	3,737.6
Cash dividends declared per common share	\$ 0.50	\$ 0.44

(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.

JPMorgan Chase & Co.
Consolidated statements of comprehensive income (unaudited)

(in millions)	Three months ended March 31,	
	2017	2016
Net income	\$ 6,448	\$ 5,520
Other comprehensive income/(loss), after-tax		
Unrealized gains on investment securities	238	425
Translation adjustments, net of hedges	7	(2)
Cash flow hedges	91	(70)
Defined benefit pension and OPEB plans	(15)	25
DVA on fair value option elected liabilities	(69)	58
Total other comprehensive income, after-tax	252	436
Comprehensive income	\$ 6,700	\$ 5,956

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated balance sheets (unaudited)

(in millions, except share data)	Mar 31, 2017	Dec 31, 2016
Assets		
Cash and due from banks	\$ 20,484	\$ 23,873
Deposits with banks	439,911	365,762
Federal funds sold and securities purchased under resale agreements (included \$18,396 and \$21,506 at fair value)	190,566	229,967
Securities borrowed (included \$77 and \$0 at fair value)	92,309	96,409
Trading assets (included assets pledged of \$146,958 and \$115,847)	402,513	372,130
Securities (included \$232,937 and \$238,891 at fair value and assets pledged of \$18,418 and \$16,115)	281,850	289,059
Loans (included \$2,103 and \$2,230 at fair value)	895,974	894,765
Allowance for loan losses	(13,413)	(13,776)
Loans, net of allowance for loan losses	882,561	880,989
Accrued interest and accounts receivable	60,038	52,330
Premises and equipment	14,227	14,131
Goodwill	47,292	47,288
Mortgage servicing rights	6,079	6,096
Other intangible assets	847	862
Other assets (included \$7,623 and \$7,557 at fair value and assets pledged of \$1,548 and \$1,603)	107,613	112,076
Total assets^(a)	\$ 2,546,290	\$ 2,490,972
Liabilities		
Deposits (included \$16,382 and \$13,912 at fair value)	\$ 1,422,999	\$ 1,375,179
Federal funds purchased and securities loaned or sold under repurchase agreements (included \$730 and \$687 at fair value)	183,316	165,666
Commercial paper	14,908	11,738
Other borrowed funds (included \$8,752 and \$9,105 at fair value)	24,342	22,705
Trading liabilities	135,488	136,659
Accounts payable and other liabilities (included \$10,947 and \$9,120 at fair value)	183,200	190,543
Beneficial interests issued by consolidated VIEs (included \$124 and \$120 at fair value)	36,682	39,047
Long-term debt (included \$41,937 and \$37,686 at fair value)	289,492	295,245
Total liabilities^(a)	2,290,427	2,236,782
Commitments and contingencies (see Notes 20, 21 and 22)		
Stockholders' equity		
Preferred stock (\$1 par value; authorized 200,000,000 shares; issued 2,606,750 shares)	26,068	26,068
Common stock (\$1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares)	4,105	4,105
Additional paid-in capital	90,395	91,627
Retained earnings	166,663	162,440
Accumulated other comprehensive income/(loss)	(923)	(1,175)
Shares held in restricted stock units ("RSU") Trust, at cost (472,953 shares)	(21)	(21)
Treasury stock, at cost (552,130,094 and 543,744,003 shares)	(30,424)	(28,854)
Total stockholders' equity	255,863	254,190
Total liabilities and stockholders' equity	\$ 2,546,290	\$ 2,490,972

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at March 31, 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)	Mar 31, 2017	Dec 31, 2016
Assets		
Trading assets	\$ 2,846	\$ 3,185
Loans	72,003	75,614
All other assets	3,162	3,321
Total assets	\$ 78,011	\$ 82,120
Liabilities		
Beneficial interests issued by consolidated VIEs	\$ 36,682	\$ 39,047
All other liabilities	467	490
Total liabilities	\$ 37,149	\$ 39,537

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 of JPMorgan Chase. At both March 31, 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 14.

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of changes in stockholders' equity (unaudited)

(in millions, except per share data)	Three months ended March 31,	
	2017	2016
Preferred stock		
Balance at January 1 and March 31	\$ 26,068	\$ 26,068
Common stock		
Balance at January 1 and March 31	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	(1,087)	(732)
Other	(145)	14
Balance at March 31	90,395	91,782
Retained earnings		
Balance at January 1	162,440	146,420
Cumulative effect of change in accounting principle	–	(154)
Net income	6,448	5,520
Dividends declared:		
Preferred stock	(412)	(412)
Common stock (\$0.50 and \$0.44 per share)	(1,813)	(1,644)
Balance at March 31	166,663	149,730
Accumulated other comprehensive income		
Balance at January 1	(1,175)	192
Cumulative effect of change in accounting principle	–	154
Other comprehensive income/(loss)	252	436
Balance at March 31	(923)	782
Shares held in RSU Trust, at cost		
Balance at January 1 and March 31	(21)	(21)
Treasury stock, at cost		
Balance at January 1	(28,854)	(21,691)
Purchase of treasury stock	(2,832)	(1,696)
Reissuance from treasury stock	1,262	1,098
Balance at March 31	(30,424)	(22,289)
Total stockholders' equity	\$ 255,863	\$ 250,157

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of cash flows (unaudited)

(in millions)	Three months ended March 31,	
	2017	2016
Net income	\$ 6,448	\$ 5,520
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	1,315	1,824
Depreciation and amortization	1,464	1,289
Deferred tax expense	629	906
Other	604	468
Originations and purchases of loans held-for-sale	(24,594)	(7,457)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	21,262	7,818
Net change in:		
Trading assets	(17,654)	(32,979)
Securities borrowed	4,177	(4,826)
Accrued interest and accounts receivable	(7,767)	(11,115)
Other assets	11,854	(7,464)
Trading liabilities	(11,518)	24,919
Accounts payable and other liabilities	(9,048)	124
Other operating adjustments	2,792	(410)
Net cash used in operating activities	(20,036)	(21,383)
Investing activities		
Net change in:		
Deposits with banks	(74,149)	(20,181)
Federal funds sold and securities purchased under resale agreements	39,380	(10,577)
Held-to-maturity securities:		
Proceeds from paydowns and maturities	1,193	1,218
Purchases	-	(134)
Available-for-sale securities:		
Proceeds from paydowns and maturities	14,522	15,845
Proceeds from sales	12,751	11,676
Purchases	(20,416)	(19,525)
Proceeds from sales and securitizations of loans held-for-investment	2,251	2,860
Other changes in loans, net	(2,545)	(15,925)
All other investing activities, net	(24)	162
Net cash used in investing activities	(27,037)	(34,581)
Financing activities		
Net change in:		
Deposits	35,930	51,978
Federal funds purchased and securities loaned or sold under repurchase agreements	17,655	8,304
Commercial paper and other borrowed funds	4,308	807
Beneficial interests issued by consolidated VIEs	146	(2,744)
Proceeds from long-term borrowings	16,538	15,718
Payments of long-term borrowings	(26,049)	(16,560)
Treasury stock purchased	(2,832)	(1,696)
Dividends paid	(2,045)	(1,946)
All other financing activities, net	(46)	(277)
Net cash provided by financing activities	43,605	53,584
Effect of exchange rate changes on cash and due from banks	79	102
Net decrease in cash and due from banks	(3,389)	(2,278)
Cash and due from banks at the beginning of the period	23,873	20,490
Cash and due from banks at the end of the period	\$ 20,484	\$ 18,212
Cash interest paid	\$ 3,195	\$ 2,129
Cash income taxes paid, net	356	447

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these 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 23.

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 of JPMorgan 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 of JPMorgan Chase’s 2016 Annual Report.

The following table presents the assets and liabilities reported at fair value as of March 31, 2017, and December 31, 2016, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

March 31, 2017 (in millions)	Fair value hierarchy			Derivative netting adjustments	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	\$ —	\$ 18,396	\$ —	\$ —	\$ 18,396
Securities borrowed	—	77	—	—	77
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies ^(a)	1	40,336	353	—	40,690
Residential - nonagency	—	1,621	35	—	1,656
Commercial - nonagency	—	1,350	45	—	1,395
Total mortgage-backed securities	1	43,307	433	—	43,741
U.S. Treasury and government agencies ^(a)	30,933	5,058	—	—	35,991
Obligations of U.S. states and municipalities	—	7,569	668	—	8,237
Certificates of deposit, bankers' acceptances and commercial paper	—	1,100	—	—	1,100
Non-U.S. government debt securities	35,850	27,364	47	—	63,261
Corporate debt securities	—	25,932	738	—	26,670
Loans ^(b)	—	26,922	4,588	—	31,510
Asset-backed securities	—	2,825	245	—	3,070
Total debt instruments	66,784	140,077	6,719	—	213,580
Equity securities	117,036	517	271	—	117,824
Physical commodities ^(c)	3,225	1,950	—	—	5,175
Other	—	9,055	763	—	9,818
Total debt and equity instruments^(d)	187,045	151,599	7,753	—	346,397
Derivative receivables:					
Interest rate	302	548,226	2,069	(524,168)	26,429
Credit	—	24,979	1,207	(25,298)	888
Foreign exchange	936	163,027	481	(147,670)	16,774
Equity	—	35,165	949	(30,273)	5,841
Commodity	—	14,952	157	(8,978)	6,131
Total derivative receivables^(e)	1,238	786,349	4,863	(736,387)	56,063
Total trading assets^(f)	188,283	937,948	12,616	(736,387)	402,460
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies ^(a)	—	65,030	—	—	65,030
Residential - nonagency	—	16,383	1	—	16,384
Commercial - nonagency	—	7,689	—	—	7,689
Total mortgage-backed securities	—	89,102	1	—	89,103
U.S. Treasury and government agencies ^(a)	42,462	27	—	—	42,489
Obligations of U.S. states and municipalities	—	32,195	—	—	32,195
Certificates of deposit	—	58	—	—	58
Non-U.S. government debt securities	20,446	11,693	—	—	32,139
Corporate debt securities	—	4,511	—	—	4,511
Asset-backed securities:					
Collateralized loan obligations	—	24,269	622	—	24,891
Other	—	6,629	—	—	6,629
Equity securities	922	—	—	—	922
Total available-for-sale securities	63,830	168,484	623	—	232,937
Loans	—	1,699	404	—	2,103
Mortgage servicing rights	—	—	6,079	—	6,079
Other assets ^(f)	4,567	—	2,077	—	6,644
Total assets measured at fair value on a recurring basis	\$ 256,680	\$ 1,126,604	\$ 21,799	\$ (736,387)	\$ 668,696
Deposits	\$ —	\$ 14,249	\$ 2,133	\$ —	\$ 16,382
Federal funds purchased and securities loaned or sold under repurchase agreements	—	730	—	—	730
Other borrowed funds	—	7,491	1,261	—	8,752
Trading liabilities:					
Debt and equity instruments ^(d)	69,525	21,343	45	—	90,913
Derivative payables:					
Interest rate	599	513,133	1,060	(504,108)	10,684
Credit	—	24,924	1,190	(24,689)	1,425
Foreign exchange	986	166,282	1,971	(154,074)	15,165
Equity	—	38,495	2,845	(32,377)	8,963
Commodity	—	17,416	213	(9,291)	8,338
Total derivative payables^(e)	1,585	760,250	7,279	(724,539)	44,575
Total trading liabilities	71,110	781,593	7,324	(724,539)	135,488
Accounts payable and other liabilities	10,936	—	11	—	10,947
Beneficial interests issued by consolidated VIEs	—	73	51	—	124
Long-term debt	—	26,042	15,895	—	41,937
Total liabilities measured at fair value on a recurring basis	\$ 82,046	\$ 830,178	\$ 26,675	\$ (724,539)	\$ 214,360

December 31, 2016 (in millions)	Fair value hierarchy			Derivative netting adjustments	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	\$ -	\$ 21,506	\$ -	\$ -	\$ 21,506
Securities borrowed	-	-	-	-	-
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies ^(a)	13	40,586	392	-	40,991
Residential - nonagency	-	1,552	83	-	1,635
Commercial - nonagency	-	1,321	17	-	1,338
Total mortgage-backed securities	13	43,459	492	-	43,964
U.S. Treasury and government agencies ^(a)	19,554	5,201	-	-	24,755
Obligations of U.S. states and municipalities	-	8,403	649	-	9,052
Certificates of deposit, bankers' acceptances and commercial paper	-	1,649	-	-	1,649
Non-U.S. government debt securities	28,443	23,076	46	-	51,565
Corporate debt securities	-	22,751	576	-	23,327
Loans ^(b)	-	28,965	4,837	-	33,802
Asset-backed securities	-	5,250	302	-	5,552
Total debt instruments	48,010	138,754	6,902	-	193,666
Equity securities	96,759	281	231	-	97,271
Physical commodities ^(c)	5,341	1,620	-	-	6,961
Other	-	9,341	761	-	10,102
Total debt and equity instruments^(d)	150,110	149,996	7,894	-	308,000
Derivative receivables:					
Interest rate	715	602,747	2,501	(577,661)	28,302
Credit	-	28,256	1,389	(28,351)	1,294
Foreign exchange	812	231,743	870	(210,154)	23,271
Equity	-	34,032	908	(30,001)	4,939
Commodity	158	18,360	125	(12,371)	6,272
Total derivative receivables^(e)	1,685	915,138	5,793	(858,538)	64,078
Total trading assets^(f)	151,795	1,065,134	13,687	(858,538)	372,078
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies ^(a)	-	64,005	-	-	64,005
Residential - nonagency	-	14,442	1	-	14,443
Commercial - nonagency	-	9,104	-	-	9,104
Total mortgage-backed securities	-	87,551	1	-	87,552
U.S. Treasury and government agencies ^(a)	44,072	29	-	-	44,101
Obligations of U.S. states and municipalities	-	31,592	-	-	31,592
Certificates of deposit	-	106	-	-	106
Non-U.S. government debt securities	22,793	12,495	-	-	35,288
Corporate debt securities	-	4,958	-	-	4,958
Asset-backed securities:					
Collateralized loan obligations	-	26,738	663	-	27,401
Other	-	6,967	-	-	6,967
Equity securities	926	-	-	-	926
Total available-for-sale securities	67,791	170,436	664	-	238,891
Loans	-	1,660	570	-	2,230
Mortgage servicing rights	-	-	6,096	-	6,096
Other assets ^(f)	4,357	-	2,223	-	6,580
Total assets measured at fair value on a recurring basis	\$ 223,943	\$ 1,258,736	\$ 23,240	\$ (858,538)	\$ 647,381
Deposits	\$ -	\$ 11,795	\$ 2,117	\$ -	\$ 13,912
Federal funds purchased and securities loaned or sold under repurchase agreements	-	687	-	-	687
Other borrowed funds	-	7,971	1,134	-	9,105
Trading liabilities:					
Debt and equity instruments ^(d)	68,304	19,081	43	-	87,428
Derivative payables:					
Interest rate	539	569,001	1,238	(559,963)	10,815
Credit	-	27,375	1,291	(27,255)	1,411
Foreign exchange	902	231,815	2,254	(214,463)	20,508
Equity	-	35,202	3,160	(30,222)	8,140
Commodity	173	20,079	210	(12,105)	8,357
Total derivative payables^(e)	1,614	883,472	8,153	(844,008)	49,231
Total trading liabilities	69,918	902,553	8,196	(844,008)	136,659
Accounts payable and other liabilities	9,107	-	13	-	9,120
Beneficial interests issued by consolidated VIEs	-	72	48	-	120
Long-term debt	-	23,792	13,894	-	37,686
Total liabilities measured at fair value on a recurring basis	\$ 79,025	\$ 946,870	\$ 25,402	\$ (844,008)	\$ 207,289

- (a) At March 31, 2017, and December 31, 2016, included total U.S. government-sponsored enterprise obligations of \$77.2 billion and \$80.6 billion, respectively, which were predominantly mortgage-related.
- (b) At March 31, 2017, and December 31, 2016, included within trading loans were \$12.4 billion and \$16.5 billion, respectively, of residential first-lien mortgages, and \$2.8 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 \$7.2 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).

- (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 be 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 March 31, 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 both \$1.0 billion. Included in the balances at March 31, 2017, and December 31, 2016, were trading assets of \$53 million and \$52 million, respectively, and other assets of \$979 million and \$977 million, respectively.

Transfers between levels for instruments carried at fair value on a recurring basis

For the three months ended March 31, 2017 and 2016, there were no individually significant transfers.

All transfers 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 of JPMorgan 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 1 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 March 31, 2017, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range presented; equity correlation inputs were concentrated towards the lower end of the range; 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 upper 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 were concentrated towards the lower end of the range; 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; credit spreads were concentrated towards the lower end of the range.

Level 3 inputs^(a)

March 31, 2017 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs ^(b)	Range of input values	Weighted average
Residential mortgage-backed securities and loans ^(b)	\$ 2,572	Discounted cash flows	Yield	2% - 20%	5%
			Prepayment speed	0% - 16%	8%
			Conditional default rate	0% - 10%	2%
			Loss severity	0% - 100%	8%
Commercial mortgage-backed securities and loans ^(c)	1,137	Market comparables	Price	\$ 0 - \$ 100	\$ 95
Obligations of U.S. states and municipalities	668	Market comparables	Price	\$ 48 - \$ 100	\$ 52
Corporate debt securities	738	Market comparables	Price	\$ 0 - \$ 200	\$ 93
Loans ^(d)	1,717	Market comparables	Price	\$ 0 - \$ 106	\$ 89
Asset-backed securities	622	Discounted cash flows	Credit spread	244 bps - 370 bps	269 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	30%	30%
			Price	\$ 0 - \$ 155	\$ 81
Net interest rate derivatives	827	Option pricing	Interest rate spread volatility	3% - 38%	
			Interest rate correlation	(30)% - 98%	
			IR-FX correlation	60% - 65%	
			Prepayment speed	5% - 15%	
Net credit derivatives	17	Discounted cash flows	Credit correlation	30% - 85%	
			Credit spread	0 bps - 2,200 bps	
			Recovery rate	20% - 70%	
			Yield	4% - 8%	
			Prepayment speed	1% - 14%	
			Conditional default rate	2% - 100%	
			Loss severity	45% - 88%	
			Price	\$ 0 - \$ 155	\$ 81
Net foreign exchange derivatives	(1,135)	Option pricing	IR-FX correlation	(50)% - 65%	
	(355)	Discounted cash flows	Prepayment speed	7%	
Net equity derivatives	(1,896)	Option pricing	Equity volatility	20% - 55%	
			Equity correlation	40% - 85%	
			Equity-FX correlation	(70)% - 25%	
			Equity-IR correlation	20% - 40%	
Net commodity derivatives	(56)	Option pricing	Forward commodity price	\$ 43 - \$ 55 per barrel	
			Commodity volatility	23% - 54%	
			Commodity correlation	15% - 97%	
MSRs	6,079	Discounted cash flows	Refer to Note 15		
Other assets	1,289	Discounted cash flows	Credit spread	40 bps - 90 bps	70 bps
			Yield	0% - 31%	25%
			EBITDA multiple	6.3x - 10.0x	7.5x
Long-term debt, other borrowed funds, and deposits ^(e)	19,289	Option pricing	Interest rate spread volatility	3% - 38%	
			Interest rate correlation	(30)% - 98%	
			IR-FX correlation	(50)% - 65%	
			Equity correlation	40% - 85%	
			Equity-FX correlation	(70)% - 25%	
			Equity-IR correlation	20% - 40%	
Other level 3 assets and liabilities, net ^(f)	211				

(a) 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.

(b) Includes U.S. government agency securities of \$340 million, nonagency securities of \$36 million and trading loans of \$2.2 billion.

(c) Includes U.S. government agency securities of \$13 million, nonagency securities of \$45 million, trading loans of \$677 million and non-trading loans of \$402 million.

(d) Includes trading loans of \$1.7 billion and non-trading loans of \$2 million.

(e) 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.

(f) Includes level 3 assets and liabilities that are insignificant both individually and in aggregate.

(g) 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 months ended March 31, 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.

Three months ended March 31, 2017 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at March 31, 2017	
	Fair value at January 1, 2017	Total realized/ unrealized gains/ (losses)	Purchases ^(g)	Sales	Settlements ^(h)	Transfers into level 3 ⁽ⁱ⁾	Transfers (out of) level 3 ⁽ⁱ⁾	Fair value at March 31, 2017		
Assets:										
Trading assets:										
Debt instruments:										
Mortgage-backed securities:										
U.S. government agencies	\$ 392	\$ 4	\$ 79	\$ (97)	\$ (16)	\$ 7	\$ (16)	\$ 353	\$ (1)	
Residential - nonagency	83	9	5	(17)	(4)	15	(56)	35	1	
Commercial - nonagency	17	3	7	(8)	(3)	30	(1)	45	(1)	
Total mortgage-backed securities	492	16	91	(122)	(23)	52	(73)	433	(1)	
Obligations of U.S. states and municipalities	649	8	85	(69)	(5)	—	—	668	8	
Non-U.S. government debt securities	46	—	72	(83)	—	26	(14)	47	—	
Corporate debt securities	576	(9)	423	(108)	(122)	33	(55)	738	(9)	
Loans	4,837	110	762	(744)	(375)	196	(198)	4,588	61	
Asset-backed securities	302	14	98	(138)	(11)	8	(28)	245	5	
Total debt instruments	6,902	139	1,531	(1,264)	(536)	315	(368)	6,719	64	
Equity securities	231	13	56	(6)	—	1	(24)	271	12	
Other	761	22	19	—	(47)	8	—	763	31	
Total trading assets - debt and equity instruments	7,894	174 ^(c)	1,606	(1,270)	(583)	324	(392)	7,753	107 ^(c)	
Net derivative receivables: ^(a)										
Interest rate	1,263	44	16	(23)	(303)	4	8	1,009	6	
Credit	98	(46)	—	(2)	(42)	11	(2)	17	(43)	
Foreign exchange	(1,384)	(24)	—	(2)	(91)	11	—	(1,490)	(18)	
Equity	(2,252)	69	336	(45)	(24)	(73)	93	(1,896)	(89)	
Commodity	(85)	18	—	—	2	6	3	(56)	26	
Total net derivative receivables	(2,360)	61 ^(c)	352	(72)	(458)	(41)	102	(2,416)	(118) ^(c)	
Available-for-sale securities:										
Asset-backed securities	663	10	—	(50)	(1)	—	—	622	8	
Other	1	—	—	—	—	—	—	1	—	
Total available-for-sale securities	664	10 ^(d)	—	(50)	(1)	—	—	623	8 ^(d)	
Loans	570	6 ^(c)	—	—	(172)	—	—	404	6 ^(c)	
Mortgage servicing rights	6,096	43 ^(e)	217	(71)	(206)	—	—	6,079	43 ^(e)	
Other assets	2,223	37 ^(c)	3	(77)	(109)	—	—	2,077	33 ^(c)	
Fair value measurements using significant unobservable inputs										
Three months ended March 31, 2017 (in millions)	Fair value at January 1, 2017	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements ^(h)	Transfers into level 3 ⁽ⁱ⁾	Transfers (out of) level 3 ⁽ⁱ⁾	Fair value at March 31, 2017	Change in unrealized (gains)/losses related to financial instruments held at Mar. 31, 2017
Liabilities: ^(b)										
Deposits	\$ 2,117	\$ (24) ^(c)	\$ —	\$ —	\$ 309	\$ (80)	\$ —	\$ (189)	\$ 2,133	\$ (25) ^(c)
Federal funds purchased and securities loaned or sold under repurchase agreements	—	—	—	—	—	—	—	—	—	—
Other borrowed funds	1,134	1 ^(c)	—	—	707	(585)	17	(13)	1,261	2 ^(c)
Trading liabilities - debt and equity instruments	43	—	(1)	2	—	1	2	(2)	45	—
Accounts payable and other liabilities	13	—	—	—	—	(2)	—	—	11	—
Beneficial interests issued by consolidated VIEs	48	3 ^(c)	—	—	—	—	—	—	51	3 ^(c)
Long-term debt	13,894	426 ^(c)	—	—	4,652	(2,811)	35	(301)	15,895	421 ^(c)

Three months ended March 31, 2016 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at March 31, 2016	
	Fair value at January 1, 2016	Total realized/ unrealized gains/ (losses)	Purchases ^(a)	Sales	Settlements ^(b)	Transfers into level 3 ^(c)	Transfers (out of) level 3 ^(c)	Fair value at March 31, 2016		
Assets:										
Federal funds sold and securities purchased under resale agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4	\$ -	\$ 4	\$ -	
Trading assets:										
Debt instruments:										
Mortgage-backed securities:										
U.S. government agencies	715	(50)	128	(158)	(30)	81	(36)	650	(53)	
Residential - nonagency	194	-	34	(36)	(5)	14	(15)	186	(3)	
Commercial - nonagency	115	(5)	50	(5)	-	127	(87)	195	(4)	
Total mortgage-backed securities	1,024	(55)	212	(199)	(35)	222	(138)	1,031	(60)	
Obligations of U.S. states and municipalities	651	5	36	(66)	(6)	-	-	620	5	
Non-U.S. government debt securities	74	10	4	(32)	-	-	(16)	40	7	
Corporate debt securities	736	22	79	(55)	(57)	39	(110)	654	24	
Loans	6,604	29	444	(411)	(304)	523	(109)	6,776	8	
Asset-backed securities	1,832	1	177	(136)	(875)	204	(13)	1,190	(8)	
Total debt instruments	10,921	12	952	(899)	(1,277)	988	(386)	10,311	(24)	
Equity securities	265	6	31	(9)	(19)	6	(1)	279	3	
Other	744	(9)	184	(143)	(6)	22	(69)	723	38	
Total trading assets - debt and equity instruments	11,930	9 ^(c)	1,167	(1,051)	(1,302)	1,016	(456)	11,313	17 ^(c)	
Net derivative receivables: ^(a)										
Interest rate	876	206	44	(8)	(262)	6	(16)	846	7	
Credit	549	(246)	-	(1)	69	11	20	402	(210)	
Foreign exchange	(725)	(247)	-	(15)	(42)	(2)	(1)	(1,032)	(265)	
Equity	(1,514)	(352)	70	(107)	78	(214)	(16)	(2,055)	(399)	
Commodity	(935)	(8)	-	-	(11)	-	2	(952)	(28)	
Total net derivative receivables	(1,749)	(647) ^(c)	114	(131)	(168)	(199)	(11)	(2,791)	(895) ^(c)	
Available-for-sale securities:										
Asset-backed securities	823	(8)	-	-	(6)	-	-	809	(8)	
Other	1	-	-	-	-	-	-	1	-	
Total available-for-sale securities	824	(8) ^(d)	-	-	(6)	-	-	810	(8) ^(d)	
Loans	1,518	22 ^(c)	-	-	(218)	-	(313)	1,009	22 ^(c)	
Mortgage servicing rights	6,608	(752) ^(e)	107	(64)	(241)	-	-	5,658	(752) ^(e)	
Other assets	2,401	32 ^(c)	14	(16)	(80)	-	-	2,351	27 ^(c)	

Three months ended March 31, 2016 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized (gains)/ losses related to financial instruments held at March 31, 2016	
	Fair value at January 1, 2016	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements ^(b)	Transfers into level 3 ^(c)	Transfers (out of) level 3 ^(c)		Fair value at March 31, 2016
Liabilities: ^(b)										
Deposits	\$ 2,950	\$ 42 ^(c)	\$ -	\$ -	\$ 166	\$ (509)	\$ -	\$ (230)	\$ 2,419	\$ 57 ^(c)
Federal funds purchased and securities loaned or sold under repurchase agreements	-	-	-	-	-	-	6	-	6	-
Other borrowed funds	639	(125) ^(c)	-	-	257	(199)	8	(12)	568	(42) ^(c)
Trading liabilities - debt and equity instruments	63	(4) ^(c)	-	1	-	(3)	-	(5)	52	-
Accounts payable and other liabilities	19	-	-	-	-	(3)	-	-	16	-
Beneficial interests issued by consolidated VIEs	549	8 ^(c)	-	-	143	(51)	-	-	649	8 ^(c)
Long-term debt	11,613	439 ^(c)	-	-	2,161	(1,397)	91	(320)	12,587	330 ^(c)

(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) was 12% at both March 31, 2017 and December 31, 2016.

- (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/(losses) on AFS securities, as well as other-than-temporary impairment (“OTTI”) losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange hedge accounting adjustments recorded in income on AFS securities were zero for both the three months ended March 31, 2017 and 2016. Unrealized gains/(losses) recorded on AFS securities in OCI were \$10 million and \$(8) million for the three months ended March 31, 2017 and 2016, respectively.
- (e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
- (f) Predominantly reported in other income.
- (g) Loan originations are included in purchases.
- (h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, and deconsolidation associated with beneficial interests in VIEs.
- (i) All transfers into and/or out of level 3 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 0.9% of total Firm assets at March 31, 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 87.

Three months ended March 31, 2017

Level 3 assets were \$21.8 billion at March 31, 2017, reflecting a decrease of \$1.4 billion from December 31, 2016 with no movements that were individually significant.

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) 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 84-85.

Three months ended March 31, 2017

- \$331 million of net gains on assets and \$406 million of net losses on liabilities, none of which were individually significant.

Three months ended March 31, 2016

- \$1.3 billion of net losses on assets and \$360 million net losses on liabilities, none of which were individually significant.

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.

(in millions)	Three months ended March 31,	
	2017	2016
Credit and funding adjustments:		
Derivatives CVA	\$ 221	\$ (588)
Derivatives DVA and FVA	(7)	(166)

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 of JPMorgan Chase's 2016 Annual Report.

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 March 31, 2017 and 2016, by major product category and fair value hierarchy.

March 31, 2017 (in millions)	Fair value hierarchy			Total fair value
	Level 1	Level 2	Level 3	
Loans	\$ —	\$ 6,530 ^(a)	\$ 221 ^(b)	\$ 6,751
Other assets	—	4	243	247
Total assets measured at fair value on a nonrecurring basis	—	6,534	464 ^(b)	6,998
Accounts payable and other liabilities	—	2	—	2
Total liabilities measured at fair value on a nonrecurring basis	\$ —	\$ 2	\$ —	\$ 2

March 31, 2016 (in millions)	Fair value hierarchy			Total fair value
	Level 1	Level 2	Level 3	
Loans	\$ —	\$ 314	\$ 234	\$ 548
Other assets	—	—	49	49
Total assets measured at fair value on a nonrecurring basis	—	314	283	597
Accounts payable and other liabilities	—	2	—	2
Total liabilities measured at fair value on a nonrecurring basis	\$ —	\$ 2	\$ —	\$ 2

(a) 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 24.

(b) Of the \$464 million in level 3 assets measured at fair value on a nonrecurring basis as of March 31, 2017, \$182 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 months ended March 31, 2017 and 2016, related to financial instruments held at those dates.

Three months ended March 31, (in millions)	2017	2016
Loans	\$ (322) ^(a)	\$ (61)
Other Assets	(31)	(8)
Accounts payable and other liabilities	—	(2)
Total nonrecurring fair value gains/ (losses)	\$ (353)	\$ (71)

(a) 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 24.

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.

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 March 31, 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.

(in billions)	March 31, 2017					December 31, 2016				
	Carrying value	Estimated fair value hierarchy			Total estimated fair value	Carrying value	Estimated fair value hierarchy			Total estimated fair value
		Level 1	Level 2	Level 3			Level 1	Level 2	Level 3	
Financial assets										
Cash and due from banks	\$ 20.5	\$ 20.5	\$ –	\$ –	\$ 20.5	\$ 23.9	\$ 23.9	\$ –	\$ –	\$ 23.9
Deposits with banks	439.9	436.9	3.0	–	439.9	365.8	362.0	3.8	–	365.8
Accrued interest and accounts receivable	60.0	–	59.5	0.1	59.6	52.3	–	52.2	0.1	52.3
Federal funds sold and securities purchased under resale agreements	172.2	–	172.0	0.2	172.2	208.5	–	208.3	0.2	208.5
Securities borrowed	92.2	–	92.2	–	92.2	96.4	–	96.4	–	96.4
Securities, held-to-maturity	48.9	–	49.6	–	49.6	50.2	–	50.9	–	50.9
Loans, net of allowance for loan losses ^(a)	880.5	–	34.6	843.5	878.1	878.8	–	24.1	851.0	875.1
Other	64.9	–	54.6	14.7	69.3	71.4	0.1	60.8	14.3	75.2
Financial liabilities										
Deposits	\$ 1,406.6	\$ –	\$ 1,406.7	\$ –	\$ 1,406.7	\$ 1,361.3	\$ –	\$ 1,361.3	\$ –	\$ 1,361.3
Federal funds purchased and securities loaned or sold under repurchase agreements	182.6	–	182.6	–	182.6	165.0	–	165.0	–	165.0
Commercial paper	14.9	–	14.9	–	14.9	11.7	–	11.7	–	11.7
Other borrowed funds	15.6	–	15.5	0.1	15.6	13.6	–	13.6	–	13.6
Accounts payable and other liabilities	147.0	–	143.2	3.5	146.7	148.0	–	144.8	3.4	148.2
Beneficial interests issued by consolidated VIEs	36.6	–	36.5	–	36.5	38.9	–	38.9	–	38.9
Long-term debt and junior subordinated deferrable interest debentures	247.6	–	250.5	2.1	252.6	257.5	–	260.0	2.0	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.

(in billions)	March 31, 2017					December 31, 2016				
	Carrying value ^(a)	Estimated fair value hierarchy			Total estimated fair value	Carrying value ^(a)	Estimated fair value hierarchy			Total estimated fair value
		Level 1	Level 2	Level 3			Level 1	Level 2	Level 3	
Wholesale lending-related commitments	\$ 1.1	\$ –	\$ –	\$ 1.7	\$ 1.7	\$ 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.

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 table presents the changes in fair value included in the Consolidated statements of income for the three months ended March 31, 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.

(in millions)	Three months ended March 31,					
	2017			2016		
	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	\$ (21)	\$ –	\$ (21)	\$ 68	\$ –	\$ 68
Securities borrowed	77	–	77	(2)	–	(2)
Trading assets:						
Debt and equity instruments, excluding loans	361	–	361	28	(1) ^(c)	27
Loans reported as trading assets:						
Changes in instrument-specific credit risk	174	6 ^(c)	180	64	(2) ^(c)	62
Other changes in fair value	34	123 ^(c)	157	116	317 ^(c)	433
Loans:						
Changes in instrument-specific credit risk	(1)	–	(1)	13	–	13
Other changes in fair value	–	–	–	7	–	7
Other assets	4	(6) ^(d)	(2)	12	(20) ^(d)	(8)
Deposits ^(a)	(159)	–	(159)	(343)	–	(343)
Federal funds purchased and securities loaned or sold under repurchase agreements	5	–	5	(17)	–	(17)
Other borrowed funds ^(a)	(474)	–	(474)	528	–	528
Trading liabilities	(1)	–	(1)	4	–	4
Beneficial interests issued by consolidated VIEs	–	–	–	7	–	7
Long-term debt ^{(a)(b)}	(753)	–	(753)	(318)	–	(318)

(a) Unrealized gains/(losses) 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/(losses) are recorded in principal transactions revenue. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transaction revenue were not material for the three months ended March 31, 2017 and 2016, respectively.

(b) Long-term debt measured at fair value predominantly relates to structured notes containing embedded derivatives. Although the risk associated with the structured notes is actively managed, the gains/(losses) 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.

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 March 31, 2017, and December 31, 2016, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

(in millions)	March 31, 2017			December 31, 2016		
	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans^(a)						
Nonaccrual loans						
Loans reported as trading assets	\$ 3,569	\$ 1,010	\$ (2,559)	\$ 3,338	\$ 748	\$ (2,590)
Loans	—	—	—	—	—	—
Subtotal	3,569	1,010	(2,559)	3,338	748	(2,590)
All other performing loans						
Loans reported as trading assets	32,218	30,500	(1,718)	35,477	33,054	(2,423)
Loans	2,129	2,101	(28)	2,259	2,228	(31)
Total loans	\$ 37,916	\$ 33,611	\$ (4,305)	\$ 41,074	\$ 36,030	\$ (5,044)
Long-term debt						
Principal-protected debt	\$ 23,892 ^(c)	\$ 21,004	\$ (2,888)	\$ 21,602 ^(c)	\$ 19,195	\$ (2,407)
Nonprincipal-protected debt ^(b)	NA	20,933	NA	NA	18,491	NA
Total long-term debt	NA	\$ 41,937	NA	NA	\$ 37,686	NA
Long-term beneficial interests						
Nonprincipal-protected debt	NA	\$ 124	NA	NA	\$ 120	NA
Total long-term beneficial interests	NA	\$ 124	NA	NA	\$ 120	NA

(a) There were no performing loans that were ninety days or more past due as of March 31, 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 March 31, 2017, and December 31, 2016, the contractual amount of lending-related commitments for which the fair value option was elected was \$4.6 billion for both years, with a corresponding fair value of \$(109) 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 20 of this Form 10-Q.

Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk type.

(in millions)	March 31, 2017				December 31, 2016			
	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	\$ 18,769	\$ 134	\$ 5,444	\$ 24,347	\$ 16,296	\$ 184	\$ 4,296	\$ 20,776
Credit	3,450	76	—	3,526	3,267	225	—	3,492
Foreign exchange	2,567	169	6	2,742	2,365	135	6	2,506
Equity	16,251	7,982	5,773	30,006	14,831	8,234	5,481	28,546
Commodity	432	27	2,834	3,293	488	37	1,811	2,336
Total structured notes	\$ 41,469	\$ 8,388	\$ 14,057	\$ 63,914	\$ 37,247	\$ 8,815	\$ 11,594	\$ 57,656

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.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	10-Q page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	97
◦ Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	98
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	97
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate	98
◦ Foreign exchange	Hedge the value of the Firm’s investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	98
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	97
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSR’s	Specified risk management	CCB	99
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	99
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	99
◦ Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	99
Market-making derivatives and other activities:				
◦ Various	Market-making and related risk management	Market-making and other	CIB	99
◦ Various	Other derivatives	Market-making and other	CIB, Corporate	99

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of March 31, 2017, and December 31, 2016.

(in billions)	Notional amounts ^(b)	
	March 31, 2017	December 31, 2016
Interest rate contracts		
Swaps	\$ 21,380	\$ 22,000
Futures and forwards	5,568	5,289
Written options	3,329	3,091
Purchased options	3,687	3,482
Total interest rate contracts	33,964	33,862
Credit derivatives^(a)	2,014	2,032
Foreign exchange contracts		
Cross-currency swaps	3,595	3,359
Spot, futures and forwards	6,121	5,341
Written options	835	734
Purchased options	822	721
Total foreign exchange contracts	11,373	10,155
Equity contracts		
Swaps	266	258
Futures and forwards	77	59
Written options	575	417
Purchased options	421	345
Total equity contracts	1,339	1,079
Commodity contracts		
Swaps	107	102
Spot, futures and forwards	143	130
Written options	89	83
Purchased options	98	94
Total commodity contracts	437	409
Total derivative notional amounts	\$ 49,127	\$ 47,537

(a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on page 100.

(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 March 31, 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.

Free-standing derivative receivables and payables^(a)

March 31, 2017 (in millions)	Gross derivative receivables			Net derivative receivables ^(b)	Gross derivative payables			Net derivative payables ^(b)
	Not designated as hedges	Designated as hedges	Total derivative receivables		Not designated as hedges	Designated as hedges	Total derivative payables	
Trading assets and liabilities								
Interest rate	\$ 546,625	\$ 3,971	\$ 550,596	\$ 26,429	\$ 512,100	\$ 2,692	\$ 514,792	\$ 10,684
Credit	26,187	—	26,187	888	26,114	—	26,114	1,425
Foreign exchange	164,129	315	164,444	16,774	167,849	1,390	169,239	15,165
Equity	36,115	—	36,115	5,841	41,340	—	41,340	8,963
Commodity	15,050	58	15,108	6,131	17,443	186	17,629	8,338
Total fair value of trading assets and liabilities	\$ 788,106	\$ 4,344	\$ 792,450	\$ 56,063	\$ 764,846	\$ 4,268	\$ 769,114	\$ 44,575

December 31, 2016 (in millions)	Gross derivative receivables			Net derivative receivables ^(b)	Gross derivative payables			Net derivative payables ^(b)
	Not designated as hedges	Designated as hedges	Total derivative receivables		Not designated as hedges	Designated as hedges	Total derivative payables	
Trading assets and liabilities								
Interest rate	\$ 601,557	\$ 4,406	\$ 605,963	\$ 28,302	\$ 567,894	\$ 2,884	\$ 570,778	\$ 10,815
Credit	29,645	—	29,645	1,294	28,666	—	28,666	1,411
Foreign exchange	232,137	1,289	233,426	23,271	233,823	1,148	234,971	20,508
Equity	34,940	—	34,940	4,939	38,362	—	38,362	8,140
Commodity	18,505	137	18,642	6,272	20,283	179	20,462	8,357
Total fair value of trading assets and liabilities	\$ 916,784	\$ 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 March 31, 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 U.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.

(in millions)	March 31, 2017			December 31, 2016		
	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
Over-the-counter ("OTC")	\$ 336,177	\$ (314,642)	\$ 21,535	\$ 365,227	\$ (342,173)	\$ 23,054
OTC-cleared	209,484	(209,353)	131	235,399	(235,261)	138
Exchange-traded ^(a)	219	(173)	46	241	(227)	14
Total interest rate contracts	545,880	(524,168)	21,712	600,867	(577,661)	23,206
Credit contracts:						
OTC	19,012	(19,003)	9	23,130	(22,612)	518
OTC-cleared	6,362	(6,295)	67	5,746	(5,739)	7
Total credit contracts	25,374	(25,298)	76	28,876	(28,351)	525
Foreign exchange contracts:						
OTC	159,127	(145,197)	13,930	226,271	(208,962)	17,309
OTC-cleared	2,495	(2,458)	37	1,238	(1,165)	73
Exchange-traded ^(a)	117	(15)	102	104	(27)	77
Total foreign exchange contracts	161,739	(147,670)	14,069	227,613	(210,154)	17,459
Equity contracts:						
OTC	20,479	(19,517)	962	20,868	(20,570)	298
OTC-cleared	–	–	–	–	–	–
Exchange-traded ^(a)	12,994	(10,756)	2,238	11,439	(9,431)	2,008
Total equity contracts	33,473	(30,273)	3,200	32,307	(30,001)	2,306
Commodity contracts:						
OTC	9,403	(4,006)	5,397	11,571	(5,605)	5,966
OTC-cleared	–	–	–	–	–	–
Exchange-traded ^(a)	5,173	(4,972)	201	6,794	(6,766)	28
Total commodity contracts	14,576	(8,978)	5,598	18,365	(12,371)	5,994
Derivative receivables with appropriate legal opinion	781,042	(736,387) ^(b)	44,655	908,028	(858,538) ^(b)	49,490
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	11,408		11,408	14,588		14,588
Total derivative receivables recognized on the Consolidated balance sheets	\$ 792,450		\$ 56,063	\$ 922,616		\$ 64,078
Collateral not nettable on the Consolidated balance sheets^{(c)(d)}			(16,489)			(18,638)
Net amounts			\$ 39,574			\$ 45,440

(in millions)	March 31, 2017			December 31, 2016		
	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	\$ 307,287	\$ (298,785)	\$ 8,502	\$ 338,502	\$ (329,325)	\$ 9,177
OTC-cleared	205,350	(205,213)	137	230,464	(230,463)	1
Exchange-traded ^(a)	121	(110)	11	196	(175)	21
Total interest rate contracts	512,758	(504,108)	8,650	569,162	(559,963)	9,199
Credit contracts:						
OTC	19,268	(18,470)	798	22,366	(21,614)	752
OTC-cleared	6,220	(6,219)	1	5,641	(5,641)	–
Total credit contracts	25,488	(24,689)	799	28,007	(27,255)	752
Foreign exchange contracts:						
OTC	164,165	(151,871)	12,294	228,300	(213,296)	15,004
OTC-cleared	2,198	(2,197)	1	1,158	(1,158)	–
Exchange-traded ^(a)	95	(6)	89	328	(9)	319
Total foreign exchange contracts	166,458	(154,074)	12,384	229,786	(214,463)	15,323
Equity contracts:						
OTC	25,694	(21,627)	4,067	24,688	(20,808)	3,880
OTC-cleared	–	–	–	–	–	–
Exchange-traded ^(a)	11,525	(10,750)	775	10,004	(9,414)	590
Total equity contracts	37,219	(32,377)	4,842	34,692	(30,222)	4,470
Commodity contracts:						
OTC	11,915	(4,241)	7,674	12,885	(5,252)	7,633
OTC-cleared	–	–	–	–	–	–
Exchange-traded ^(a)	5,274	(5,050)	224	7,099	(6,853)	246
Total commodity contracts	17,189	(9,291)	7,898	19,984	(12,105)	7,879
Derivative payables with appropriate legal opinions	759,112	(724,539) ^(b)	34,573	881,631	(844,008) ^(b)	37,623
Derivative payables where an appropriate legal opinion has not been either sought or obtained	10,002		10,002	11,608		11,608
Total derivative payables recognized on the Consolidated balance sheets	\$ 769,114		\$ 44,575	\$ 893,239		\$ 49,231
Collateral not nettable on the Consolidated balance sheets^{(c)(d)(e)}			(6,795)			(8,925)
Net amounts			\$ 37,780			\$ 40,306

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.

(b) Net derivatives receivable included cash collateral netted of \$59.8 billion and \$71.9 billion at March 31, 2017, and December 31, 2016, respectively. Net derivatives payable included cash collateral netted of \$48.0 billion and \$57.3 billion related to OTC and OTC-cleared derivatives at March 31, 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 March 31, 2017, and December 31, 2016.

OTC and OTC-cleared derivative payables containing downgrade triggers

(in millions)	March 31, 2017	December 31, 2016
Aggregate fair value of net derivative payables	\$ 14,797	\$ 21,550
Collateral posted	10,721	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 March 31, 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)	March 31, 2017		December 31, 2016	
	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade ^(a)	\$ 1,040	\$ 2,530	\$ 560	\$ 2,497
Amount required to settle contracts with termination triggers upon downgrade ^(b)	226	768	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 11, 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 March 31, 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/(losses) recorded on such derivatives and the related hedged items for the three months ended March 31, 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.

Three months ended March 31, 2017 (in millions)	Gains/(losses) recorded in income			Income statement impact due to:	
	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness ^(e)	Excluded components ^(f)
Contract type					
Interest rate ^{(a)(b)}	\$ (281)	\$ 531	\$ 250	\$ (1)	\$ 251
Foreign exchange ^(c)	(775)	740	(35)	–	(35)
Commodity ^(d)	(463)	464	1	16	(15)
Total	\$ (1,519)	\$ 1,735	\$ 216	\$ 15	\$ 201

Three months ended March 31, 2016 (in millions)	Gains/(losses) recorded in income			Income statement impact due to:	
	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness ^(e)	Excluded components ^(f)
Contract type					
Interest rate ^{(a)(b)}	\$ 1,378	\$ (1,199)	\$ 179	\$ 28	\$ 151
Foreign exchange ^(c)	(1,298)	1,382	84	–	84
Commodity ^(d)	142	(138)	4	(2)	6
Total	\$ 222	\$ 45	\$ 267	\$ 26	\$ 241

(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.

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/(losses) recorded on such derivatives, for the three months ended March 31, 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.

Three months ended March 31, 2017 (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss)				
	Derivatives - effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income ^(c)	Total income statement impact	Derivatives - effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate ^(a)	\$ (11)	\$ —	\$ (11)	\$ 11	\$ 22
Foreign exchange ^(b)	(74)	—	(74)	48	122
Total	\$ (85)	\$ —	\$ (85)	\$ 59	\$ 144

Three months ended March 31, 2016 (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss)				
	Derivatives - effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income ^(c)	Total income statement impact	Derivatives - effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate ^(a)	\$ (20)	\$ —	\$ (20)	\$ (74)	\$ (54)
Foreign exchange ^(b)	(35)	—	(35)	(93)	(58)
Total	\$ (55)	\$ —	\$ (55)	\$ (167)	\$ (112)

(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 months ended March 31, 2017 and 2016.

Over the next 12 months, the Firm expects that approximately \$(51) million (after-tax) of net losses recorded in AOCI at March 31, 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.

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/(losses) recorded on such instruments for the three months ended March 31, 2017 and 2016.

Three months ended March 31, (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss)			
	2017		2016	
	Excluded components recorded directly in income ^(a)	Effective portion recorded in OCI	Excluded components recorded directly in income ^(a)	Effective portion recorded in OCI
Foreign exchange derivatives	\$ (62)	\$ (556)	\$ (85)	\$ (590)

(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 months ended March 31, 2017 and 2016.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pre-tax gains/(losses) 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.

(in millions)	Derivatives gains/(losses) recorded in income	
	Three months ended March 31,	
	2017	2016
Contract type		
Interest rate ^(a)	\$ (17)	\$ 983
Credit ^(b)	(45)	(61)
Foreign exchange ^(c)	(20)	(10)
Total	\$ (82)	\$ 912

- (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.

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.

Credit derivatives

For a more detailed discussion of credit derivatives, see Note 6 of JPMorgan 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

March 31, 2017 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings ^(b)	Net protection (sold)/purchased ^(c)	Other protection purchased ^(d)
Credit derivatives				
Credit default swaps	\$ (934,816)	\$ 959,890	\$ 25,074	\$ 7,717
Other credit derivatives ^(a)	(44,586)	47,030	2,444	19,603
Total credit derivatives	(979,402)	1,006,920	27,518	27,320
Credit-related notes	(36)	–	(36)	4,454
Total	\$ (979,438)	\$ 1,006,920	\$ 27,482	\$ 31,774

December 31, 2016 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings ^(b)	Net protection (sold)/purchased ^(c)	Other protection purchased ^(d)
Credit derivatives				
Credit default swaps	\$ (961,003)	\$ 974,252	\$ 13,249	\$ 7,935
Other credit derivatives ^(a)	(36,829)	31,859	(4,970)	19,991
Total credit derivatives	(997,832)	1,006,111	8,279	27,926
Credit-related notes	(41)	–	(41)	4,505
Total	\$ (997,873)	\$ 1,006,111	\$ 8,238	\$ 32,431

(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 March 31, 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^(a)/maturity profile

March 31, 2017 (in millions)	<1 year	1-5 years	>5 years	Total notional amount	Fair value of receivables ^(b)	Fair value of payables ^(b)	Net fair value
Risk rating of reference entity							
Investment-grade	\$ (250,604)	\$ (334,488)	\$ (60,324)	\$ (645,416)	\$ 8,345	\$ (1,997)	\$ 6,348
Noninvestment-grade	(117,757)	(179,554)	(36,711)	(334,022)	8,133	(7,855)	278
Total	\$ (368,361)	\$ (514,042)	\$ (97,035)	\$ (979,438)	\$ 16,478	\$ (9,852)	\$ 6,626

December 31, 2016 (in millions)	<1 year	1-5 years	>5 years	Total notional amount	Fair value of receivables ^(b)	Fair value of payables ^(b)	Net fair value
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)	\$ (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.

Note 5 - 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.

(in millions)	Three months ended March 31,	
	2017	2016
Underwriting		
Equity	\$ 393	\$ 202
Debt	928	550
Total underwriting	1,321	752
Advisory	496	581
Total investment banking fees	\$ 1,817	\$ 1,333

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.

(in millions)	Three months ended March 31,	
	2017	2016
Trading revenue by instrument type		
Interest rate	\$ 795	\$ 383
Credit	680	375
Foreign exchange	781	707
Equity	1,120	830
Commodity	185	226
Total trading revenue	3,561	2,521
Private equity gains	21	158
Principal transactions	\$ 3,582	\$ 2,679

Lending- and deposit-related fees

The following table presents the components of lending- and deposit-related fees.

(in millions)	Three months ended March 31,	
	2017	2016
Lending-related fees	\$ 275	\$ 272
Deposit-related fees	1,173	1,131
Total lending- and deposit-related fees	\$ 1,448	\$ 1,403

Asset management, administration and commissions

The following table presents the components of Firmwide asset management, administration and commissions.

(in millions)	Three months ended March 31,	
	2017	2016
Asset management fees		
Investment management fees ^(a)	\$ 2,216	\$ 2,128
All other asset management fees ^(b)	79	90
Total asset management fees	2,295	2,218
Total administration fees ^(c)	482	478
Commission and other fees		
Brokerage commissions	578	588
All other commissions and fees	322	340
Total commissions and fees	900	928
Total asset management, administration and commissions	\$ 3,677	\$ 3,624

- (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:

(in millions)	Three months ended March 31,	
	2017	2016
Operating lease income	\$ 824	\$ 615

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.

(in millions)	Three months ended March 31,	
	2017	2016
Interest income		
Loans ^(a)	\$ 9,750	\$ 8,854
Taxable securities	1,430	1,442
Nontaxable securities ^(b)	458	443
Total securities	1,888	1,885
Trading assets	1,858	1,698
Federal funds sold and securities purchased under resale agreements	526	554
Securities borrowed ^(c)	(44)	(92)
Deposits with banks	722	460
Other assets ^(d)	342	193
Total interest income	15,042	13,552
Interest expense		
Interest-bearing deposits	483	320
Federal funds purchased and securities loaned or sold under repurchase agreements	293	260
Commercial paper	40	33
Trading liabilities - debt, short-term and other liabilities ^(e)	438	227
Beneficial interests issued by consolidated VIEs	135	113
Long-term debt	1,589	1,219
Total interest expense	2,978	2,172
Net interest income	12,064	11,380
Provision for credit losses	1,315	1,824
Net interest income after provision for credit losses	\$ 10,749	\$ 9,556

(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 for U.S. federal income tax purposes.

(c) Negative interest income for the three months ended March 31, 2017 and 2016, was a result of increased 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.

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.

Three months ended March 31, (in millions)	Pension plans				OPEB plans	
	U.S.		Non-U.S.		2017	2016
	2017	2016	2017	2016		
Components of net periodic benefit cost						
Benefits earned during the period	\$ 75	\$ 73	\$ 7	\$ 9	\$ –	\$ –
Interest cost on benefit obligations	130	133	19	26	7	8
Expected return on plan assets	(208)	(222)	(33)	(36)	(24)	(26)
Amortization:						
Net (gain)/loss	55	59	7	5	–	–
Prior service cost/(credit)	(9)	(9)	–	–	–	–
Settlement	–	–	(3)	–	–	–
Net periodic defined benefit cost	43	34	(3)	4	(17)	(18)
Other defined benefit pension plans ^(a)	3	3	1	2	NA	NA
Total defined benefit plans	46	37	(2)	6	(17)	(18)
Total defined contribution plans	102	99	84	86	NA	NA
Total pension and OPEB cost included in compensation expense	\$ 148	\$ 136	\$ 82	\$ 92	\$ (17)	\$ (18)

(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)	March 31, 2017	December 31, 2016
Fair value of plan assets		
U.S. defined benefit pension and OPEB plans	\$ 16.8	\$ 16.2
Material non-U.S. defined benefit pension plans	3.6	3.4

There are no expected contributions to the U.S. defined benefit pension plan for 2017.

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 of JPMorgan 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.

(in millions)	Three months ended March 31,	
	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	\$ 310	\$ 284
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	291	235
Total noncash compensation expense related to employee stock-based incentive plans	\$ 601	\$ 519

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 – Noninterest expense

For details on noninterest expense, see Consolidated statements of income on page 73. Included within other expense are the following:

(in millions)	Three months ended March 31,	
	2017	2016
Legal expense/(benefit)	\$ 218	\$ (46)
FDIC-related expense	381	269

Note 10 – 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 March 31, 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 of JPMorgan Chase's 2016 Annual Report.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

(in millions)	March 31, 2017				December 31, 2016			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies ^(a)	64,467	1,042	\$ 479	\$ 65,030	\$ 63,367	\$ 1,112	\$ 474	\$ 64,005
Residential:								
Prime and Alt-A	3,793	33	18	3,808	4,256	38	22	4,272
Subprime	6,465	70	6	6,529	3,915	62	6	3,971
Non-U.S.	5,896	155	4	6,047	6,049	158	7	6,200
Commercial	7,588	111	10	7,689	9,002	122	20	9,104
Total mortgage-backed securities	88,209	1,411	517	89,103	86,589	1,492	529	87,552
U.S. Treasury and government agencies ^(a)	42,834	232	577	42,489	44,822	75	796	44,101
Obligations of U.S. states and municipalities	30,765	1,591	161	32,195	30,284	1,492	184	31,592
Certificates of deposit	58	–	–	58	106	–	–	106
Non-U.S. government debt securities	31,474	700	35	32,139	34,497	836	45	35,288
Corporate debt securities	4,431	89	9	4,511	4,916	64	22	4,958
Asset-backed securities:								
Collateralized loan obligations	24,832	66	7	24,891	27,352	75	26	27,401
Other	6,575	76	22	6,629	6,950	62	45	6,967
Total available-for-sale debt securities	229,178	4,165	1,328	232,015	235,516	4,096	1,647	237,965
Available-for-sale equity securities	922	–	–	922	914	12	–	926
Total available-for-sale securities	230,100	4,165	1,328	232,937	236,430	4,108	1,647	238,891
Held-to-maturity debt securities								
Mortgage-backed securities:								
U.S. government agencies ^(b)	28,688	569	44	29,213	29,910	638	37	30,511
Commercial	5,774	1	116	5,659	5,783	–	129	5,654
Total mortgage-backed securities	34,462	570	160	34,872	35,693	638	166	36,165
Obligations of U.S. states and municipalities	14,451	412	113	14,750	14,475	374	125	14,724
Total held-to-maturity debt securities	48,913	982	273	49,622	50,168	1,012	291	50,889
Total securities	\$ 279,013	\$ 5,147	\$ 1,601	\$ 282,559	\$ 286,598	\$ 5,120	\$ 1,938	\$ 289,780

(a) Included total U.S. government-sponsored enterprise obligations with fair values of \$47.9 billion and \$45.8 billion at March 31, 2017, and December 31, 2016, respectively, which were predominantly mortgage-related.

(b) Included total U.S. government-sponsored enterprise obligations with amortized cost of \$24.6 billion and \$25.6 billion at March 31, 2017, and December 31, 2016, respectively, which were mortgage-related.

Securities impairment

The following tables present the fair value and gross unrealized losses for investment securities by aging category at March 31, 2017, and December 31, 2016.

March 31, 2017 (in millions)	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	28,647	468	623	11	29,270	479
Residential:						
Prime and Alt-A	1,123	7	787	11	1,910	18
Subprime	494	4	150	2	644	6
Non-U.S.	–	–	823	4	823	4
Commercial	2,008	9	543	1	2,551	10
Total mortgage-backed securities	32,272	488	2,926	29	35,198	517
U.S. Treasury and government agencies	16,448	577	–	–	16,448	577
Obligations of U.S. states and municipalities	5,916	159	54	2	5,970	161
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	4,634	34	148	1	4,782	35
Corporate debt securities	526	2	298	7	824	9
Asset-backed securities:						
Collateralized loan obligations	–	–	1,054	7	1,054	7
Other	740	3	1,832	19	2,572	22
Total available-for-sale debt securities	60,536	1,263	6,312	65	66,848	1,328
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities						
Mortgage-backed securities						
U.S. government agencies	3,159	44	–	–	3,159	44
Commercial	5,300	106	309	10	5,609	116
Total mortgage-backed securities	\$ 8,459	\$ 150	\$ 309	\$ 10	\$ 8,768	\$ 160
Obligations of U.S. states and municipalities	4,368	113	–	–	4,368	113
Total held-to-maturity securities	\$ 12,827	\$ 263	\$ 309	\$ 10	\$ 13,136	\$ 273
Total securities with gross unrealized losses	\$ 73,363	\$ 1,526	\$ 6,621	\$ 75	\$ 79,984	\$ 1,601

December 31, 2016 (in millions)	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	\$ 29,856	\$ 463	\$ 506	\$ 11	\$ 30,362	\$ 474
Residential:						
Prime and Alt-A	977	2	1,018	20	1,995	22
Subprime	396	4	55	2	451	6
Non-U.S.	–	–	886	7	886	7
Commercial	2,328	17	1,078	3	3,406	20
Total mortgage-backed securities	33,557	486	3,543	43	37,100	529
U.S. Treasury and government agencies	23,543	796	–	–	23,543	796
Obligations of U.S. states and municipalities	7,215	181	55	3	7,270	184
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	4,436	36	421	9	4,857	45
Corporate debt securities	797	2	829	20	1,626	22
Asset-backed securities:						
Collateralized loan obligations	766	2	5,263	24	6,029	26
Other	739	6	1,992	39	2,731	45
Total available-for-sale debt securities	71,053	1,509	12,103	138	83,156	1,647
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity debt securities						
Mortgage-backed securities:						
U.S. government agencies	3,129	37	–	–	3,129	37
Commercial	5,163	114	441	15	5,604	129
Total mortgage-backed securities	8,292	151	441	15	8,733	166
Obligations of U.S. states and municipalities	4,702	125	–	–	4,702	125
Total Held-to-maturity securities	12,994	276	441	15	13,435	291
Total securities with gross unrealized losses	\$ 84,047	\$ 1,785	\$ 12,544	\$ 153	\$ 96,591	\$ 1,938

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 March 31, 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 March 31, 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.

(in millions)	Three months ended March 31,	
	2017	2016
Realized gains	149	\$ 109
Realized losses	(140)	(47)
OTTI losses	(12)	(11)
Net securities gains/(losses)	\$ (3)	\$ 51
OTTI losses		
Credit-related losses recognized in income	–	\$ (1)
Securities the Firm intends to sell	(12)	(10)
Total OTTI losses recognized in income	\$ (12)	\$ (11)

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 month periods ended March 31, 2017 and 2016.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at March 31, 2017, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity March 31, 2017 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years ^(c)	Total
Available-for-sale debt securities					
Mortgage-backed securities ^(a)					
Amortized cost	2,241	1,710	7,008	77,250	\$ 88,209
Fair value	2,250	1,756	7,216	77,881	\$ 89,103
Average yield ^(b)	2.09%	2.45%	3.08%	3.30%	3.23%
U.S. Treasury and government agencies					
Amortized cost	157	2,565	37,093	3,019	\$ 42,834
Fair value	157	2,569	36,757	3,006	\$ 42,489
Average yield ^(b)	0.50%	0.96%	1.37%	1.36%	1.34%
Obligations of U.S. states and municipalities					
Amortized cost	132	794	1,135	28,704	\$ 30,765
Fair value	133	816	1,192	30,054	\$ 32,195
Average yield ^(b)	5.97%	3.54%	6.41%	6.64%	6.55%
Certificates of deposit					
Amortized cost	58	—	—	—	\$ 58
Fair value	58	—	—	—	\$ 58
Average yield ^(b)	0.35%	—%	—%	—%	0.35%
Non-U.S. government debt securities					
Amortized cost	4,574	14,154	12,190	556	\$ 31,474
Fair value	4,580	14,443	12,563	553	\$ 32,139
Average yield ^(b)	1.95%	1.73%	0.92%	1.07%	1.44%
Corporate debt securities					
Amortized cost	1,686	1,188	1,459	98	\$ 4,431
Fair value	1,692	1,218	1,498	103	\$ 4,511
Average yield ^(b)	3.16%	3.24%	3.34%	3.61%	3.25%
Asset-backed securities					
Amortized cost	—	668	21,192	9,547	\$ 31,407
Fair value	—	670	21,231	9,619	\$ 31,520
Average yield ^(b)	—%	1.21%	2.45%	2.26%	2.37%
Total available-for-sale debt securities					
Amortized cost	\$ 8,848	\$ 21,079	\$ 80,077	\$ 119,174	\$ 229,178
Fair value	\$ 8,870	\$ 21,472	\$ 80,457	\$ 121,216	\$ 232,015
Average yield ^(b)	2.24%	1.83%	1.84%	3.96%	2.96%
Available-for-sale equity securities					
Amortized cost	—	—	—	922	922
Fair value	—	—	—	922	922
Average yield ^(b)	—%	—%	—%	0.34%	0.34%
Total available-for-sale securities					
Amortized cost	\$ 8,848	\$ 21,079	\$ 80,077	\$ 120,096	\$ 230,100
Fair value	\$ 8,870	\$ 21,472	\$ 80,457	\$ 122,138	\$ 232,937
Average yield ^(b)	2.24%	1.83%	1.84%	3.93%	2.95%
Held-to-maturity debt securities					
Mortgage-backed securities ^(a)					
Amortized cost	—	—	—	34,462	\$ 34,462
Fair value	—	—	—	34,872	\$ 34,872
Average yield ^(b)	—%	—%	—%	3.30%	3.30%
Obligations of U.S. states and municipalities					
Amortized cost	—	29	1,534	12,888	\$ 14,451
Fair value	—	29	1,580	13,141	\$ 14,750
Average yield ^(b)	—%	6.73%	5.12%	5.68%	5.62%
Total held-to-maturity securities					
Amortized cost	\$ —	\$ 29	\$ 1,534	\$ 47,350	\$ 48,913
Fair value	\$ —	\$ 29	\$ 1,580	\$ 48,013	\$ 49,622
Average yield ^(b)	—%	6.73%	5.12%	3.94%	3.98%

(a) As of March 31, 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 \$55.4 billion and \$56.4 billion, respectively.

- (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 11 – 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 21.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements as of March 31, 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.

(in millions)	March 31, 2017				
	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets ^(b)	Amounts not nettable on the Consolidated balance sheets ^(c)	Net amounts ^(d)
Assets					
Securities purchased under resale agreements	\$ 439,598	\$ (249,116)	\$ 190,482	\$ (179,097)	\$ 11,385
Securities borrowed	95,427	(3,118)	92,309	(66,300)	26,009
Liabilities					
Securities sold under repurchase agreements	\$ 418,342	\$ (249,116)	\$ 169,226	\$ (154,474)	\$ 14,752
Securities loaned and other ^(a)	27,207	(3,118)	24,089	(23,930)	159

(in millions)	December 31, 2016				
	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets ^(b)	Amounts not nettable on the Consolidated balance sheets ^(c)	Net amounts ^(d)
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 ^(a)	22,451	–	22,451	(22,177)	274

- (a) Includes securities-for-securities lending transactions of \$10.9 billion and \$9.1 billion at March 31, 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 March 31, 2017 and December 31, 2016, included securities purchased under resale agreements of \$18.4 billion and \$21.5 billion, respectively and securities sold under agreements to repurchase of \$730 million and \$687 million, respectively. There were \$77 million of securities borrowed at March 31, 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 March 31, 2017 and December 31, 2016, included \$8.7 billion and \$4.8 billion, respectively, of securities purchased under resale agreements; \$22.2 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 \$96 million and \$90 million, respectively, of securities loaned and other.

The tables below present as of March 31, 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.

(in millions)	Gross liability balance			
	March 31, 2017		December 31, 2016	
	Securities sold under repurchase agreements	Securities loaned and other ^(a)	Securities sold under repurchase agreements	Securities loaned and other ^(a)
Mortgage-backed securities	\$ 12,825	\$ —	\$ 10,546	\$ —
U.S. Treasury and government agencies	196,021	1,106	199,030	—
Obligations of U.S. states and municipalities	2,210	—	2,491	—
Non-U.S. government debt	165,554	4,518	149,008	1,279
Corporate debt securities	19,571	104	18,140	108
Asset-backed securities	5,182	—	7,721	—
Equity securities	16,979	21,479	15,529	21,064
Total	\$ 418,342	\$ 27,207	\$ 402,465	\$ 22,451

March 31, 2017 (in millions)	Remaining contractual maturity of the agreements				
	Overnight and continuous	Up to 30 days	30 - 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	\$ 159,921	\$ 147,682	\$ 59,704	\$ 51,035	\$ 418,342
Total securities loaned and other ^(a)	19,355	1,466	3,407	2,979	27,207

December 31, 2016 (in millions)	Remaining contractual maturity of the agreements				
	Overnight and continuous	Up to 30 days	30 - 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	\$ 140,318	\$ 157,860	\$ 55,621	\$ 48,666	\$ 402,465
Total securities loaned and other ^(a)	13,586	1,371	2,877	4,617	22,451

(a) Includes securities-for-securities lending transactions of \$10.9 billion and \$9.1 billion at March 31, 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 March 31, 2017, and December 31, 2016, the Firm held \$5.4 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.

Note 12 – 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 ^(a)	Credit card	Wholesale ^(f)
<u>Residential real estate – excluding PCI</u> <ul style="list-style-type: none"> • Home equity^(b) • Residential mortgage^(c) <u>Other consumer loans</u> <ul style="list-style-type: none"> • Auto^(d) • Consumer & Business Banking^{(d)(e)} • Student <u>Residential real estate – PCI</u> <ul style="list-style-type: none"> • Home equity • Prime mortgage • Subprime mortgage • Option ARMs 	<ul style="list-style-type: none"> • Credit card loans 	<ul style="list-style-type: none"> • Commercial and industrial • Real estate • Financial institutions • Government agencies • Other^(g)

(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.

March 31, 2017 (in millions)	Consumer, excluding credit card	Credit card ^(b)	Wholesale	Total
Retained	\$ 360,583	\$ 134,917	\$ 386,370	\$ 881,870
Held-for-sale	6,472 ^(a)	99	5,430	12,001
At fair value	–	–	2,103	2,103
Total	\$ 367,055	\$ 135,016	\$ 393,903	\$ 895,974

December 31, 2016 (in millions)	Consumer, excluding credit card	Credit card ^(b)	Wholesale	Total
Retained	\$ 364,406	\$ 141,711	\$ 383,790	\$ 889,907
Held-for-sale	238	105	2,285	2,628
At fair value	–	–	2,230	2,230
Total	\$ 364,644	\$ 141,816	\$ 388,305	\$ 894,765

(a) 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 24.

(b) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.

(c) 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 March 31, 2017, and December 31, 2016.

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.

Three months ended March 31, (in millions)	2017			2016				
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	\$ 940 ^{(a)(b)}	\$ —	\$ 284	\$ 1,224	\$ 1,265 ^{(a)(b)}	\$ —	\$ 288	\$ 1,553
Sales	590	—	2,447	3,037	760	—	1,664	2,424
Retained loans reclassified to held-for-sale	6,309 ^(c)	—	461	6,770	65	—	489	554

- (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 \$5.4 billion and \$8.7 billion for the three months ended March 31, 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 24.

The following table provides information about gains and losses on loan sales, including lower of cost or fair value adjustments, by portfolio segment.

(in millions)	Three months ended March 31,	
	2017	2016
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)^(a)		
Consumer, excluding credit card ^(b)	\$ (226)	\$ 53
Credit card	1	—
Wholesale	5	(2)
Total net gains on sales of loans (including lower of cost or fair value adjustments)	\$ (220)	\$ 51

- (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 24.

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 24.

(in millions)	March 31, 2017	December 31, 2016
Residential real estate – excluding PCI		
Home equity	\$ 37,448	\$ 39,063
Residential mortgage ^(a)	198,796	192,486
Other consumer loans		
Auto	65,568	65,814
Consumer & Business Banking ^(a)	24,386	24,307
Student ^(a)	—	7,057
Residential real estate – PCI		
Home equity	12,369	12,902
Prime mortgage	7,310	7,602
Subprime mortgage	2,860	2,941
Option ARMs	11,846	12,234
Total retained loans	\$ 360,583	\$ 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

(in millions, except ratios)	Home equity		Residential mortgage ^(b)		Total residential real estate – excluding PCI	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Loan delinquency^(a)						
Current	\$ 36,468	\$ 37,941	\$ 191,325	\$ 184,133	\$ 227,793	\$ 222,074
30-149 days past due	534	646	3,224	3,828	3,758	4,474
150 or more days past due	446	476	4,247	4,525	4,693	5,001
Total retained loans	\$ 37,448	\$ 39,063	\$ 198,796	\$ 192,486	\$ 236,244	\$ 231,549
% of 30+ days past due to total retained loans ^(b)	2.62%	2.87%	0.65%	0.75%	0.96%	1.11%
90 or more days past due and government guaranteed ^(c)	\$ –	\$ –	\$ 4,352	\$ 4,858	\$ 4,352	\$ 4,858
Nonaccrual loans	1,771	1,845	2,136	2,256	3,907	4,101
Current estimated LTV ratios^{(d)(e)}						
Greater than 125% and refreshed FICO scores:						
Equal to or greater than 660	\$ 44	\$ 70	\$ 27	\$ 30	\$ 71	\$ 100
Less than 660	11	15	43	48	54	63
101% to 125% and refreshed FICO scores:						
Equal to or greater than 660	487	668	80	135	567	803
Less than 660	166	221	141	177	307	398
80% to 100% and refreshed FICO scores:						
Equal to or greater than 660	2,571	2,961	3,053	4,026	5,624	6,987
Less than 660	828	945	607	718	1,435	1,663
Less than 80% and refreshed FICO scores:						
Equal to or greater than 660	26,737	27,317	177,061	169,579	203,798	196,896
Less than 660	4,272	4,380	7,074	6,759	11,346	11,139
No FICO/LTV available	2,332	2,486	1,519	1,650	3,851	4,136
U.S. government-guaranteed	–	–	9,191	9,364	9,191	9,364
Total retained loans	\$ 37,448	\$ 39,063	\$ 198,796	\$ 192,486	\$ 236,244	\$ 231,549
Geographic region						
California	\$ 7,302	\$ 7,644	\$ 62,227	\$ 59,802	\$ 69,529	\$ 67,446
New York	7,707	7,978	25,712	24,916	33,419	32,894
Illinois	2,825	2,947	13,407	13,126	16,232	16,073
Texas	2,168	2,225	11,188	10,772	13,356	12,997
Florida	2,046	2,133	8,784	8,395	10,830	10,528
New Jersey	2,153	2,253	6,497	6,374	8,650	8,627
Colorado	655	677	6,583	6,306	7,238	6,983
Washington	1,178	1,229	5,792	5,451	6,970	6,680
Massachusetts	356	371	5,940	5,834	6,296	6,205
Arizona	1,680	1,772	3,751	3,595	5,431	5,367
All other ^(f)	9,378	9,834	48,915	47,915	58,293	57,749
Total retained loans	\$ 37,448	\$ 39,063	\$ 198,796	\$ 192,486	\$ 236,244	\$ 231,549

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included \$3.0 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 \$3.6 billion and \$3.8 billion at March 31, 2017, and December 31, 2016, respectively.

(b) At March 31, 2017, and December 31, 2016, residential mortgage loans excluded mortgage loans insured by U.S. government agencies of \$6.2 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 subject to meeting agreed-upon servicing guidelines. At March 31, 2017, and December 31, 2016, these balances included \$2.0 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 March 31, 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 March 31, 2017, and December 31, 2016, included mortgage loans insured by U.S. government agencies of \$9.2 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 March 31, 2017, and December 31, 2016.

(in millions, except ratios)	Total loans		Total 30+ day delinquency rate	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
HELOCs: ^(a)				
Within the revolving period ^(b)	\$ 9,039	\$ 10,304	0.93%	1.27%
Beyond the revolving period	13,407	13,272	2.79	3.05
HELOANS	1,729	1,861	2.54	2.85
Total	\$ 24,175	\$ 25,437	2.08%	2.32%

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.

- (a) These HELOCs 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 HELOCs that allow interest-only payments beyond the revolving period.
- (b) 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 experiencing financial difficulty or when the collateral does not support the loan amount.

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.

(in millions)	Home equity		Residential mortgage		Total residential real estate - excluding PCI	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Impaired loans						
With an allowance	\$ 1,280	\$ 1,266	\$ 4,604	\$ 4,689	\$ 5,884	\$ 5,955
Without an allowance ^(a)	985	998	1,314	1,343	2,299	2,341
Total impaired loans^{(b)(c)}	\$ 2,265	\$ 2,264	\$ 5,918	\$ 6,032	\$ 8,183	\$ 8,296
Allowance for loan losses related to impaired loans	\$ 126	\$ 121	\$ 77	\$ 68	\$ 203	\$ 189
Unpaid principal balance of impaired loans ^(d)	3,870	3,847	8,144	8,285	12,014	12,132
Impaired loans on nonaccrual status ^(e)	1,120	1,116	1,703	1,755	2,823	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 March 31, 2017, Chapter 7 residential real estate loans included approximately 12% of home equity and 15% of residential mortgages that were 30 days or more past due.
- (b) At March 31, 2017, and December 31, 2016, \$3.8 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 March 31, 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 March 31, 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.

The following table presents average impaired loans and the related interest income reported by the Firm.

Three months ended March 31, (in millions)	Average impaired loans		Interest income on impaired loans ^(a)		Interest income on impaired loans on a cash basis ^(a)	
	2017	2016	2017	2016	2017	2016
Home equity	\$ 2,250	\$ 2,360	\$ 31	\$ 31	\$ 20	\$ 21
Residential mortgage	5,977	6,615	73	78	19	19
Total residential real estate - excluding PCI	\$ 8,227	\$ 8,975	\$ 104	\$ 109	\$ 39	\$ 40

(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.

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.

The following table presents new TDRs reported by the Firm.

(in millions)	Three months ended March 31,	
	2017	2016
Home equity	\$ 81	\$ 126
Residential mortgage	72	63
Total residential real estate - excluding PCI	\$ 153	\$ 189

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 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.

Three months ended March 31,	Home equity		Residential mortgage		Total residential real estate - excluding PCI	
	2017	2016	2017	2016	2017	2016
Number of loans approved for a trial modification	743	1,049	456	580	1,199	1,629
Number of loans permanently modified	1,217	1,692	783	732	2,000	2,424
Concession granted:^(a)						
Interest rate reduction	85%	66%	82%	74%	84%	68%
Term or payment extension	90	90	89	89	90	90
Principal and/or interest deferred	18	16	10	23	15	18
Principal forgiveness	9	9	19	25	13	14
Other ^(b)	11	1	30	18	19	6

(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.

(b) Predominantly represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides 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 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.

Three months ended March 31, (in millions, except weighted-average data and number of loans)	Home equity		Residential mortgage		Total residential real estate - excluding PCI	
	2017	2016	2017	2016	2017	2016
Weighted-average interest rate of loans with interest rate reductions - before TDR	4.63%	5.03%	5.36%	5.51%	5.03%	5.28%
Weighted-average interest rate of loans with interest rate reductions - after TDR	2.45	2.42	2.90	2.83	2.70	2.64
Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR	20	18	24	25	22	21
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	\$ 1	\$ 2	\$ 2
Principal deferred	5	8	3	10	8	18
Principal forgiven	2	3	5	12	7	15
Balance of loans that redefaulted within one year of permanent modification ^(a)	\$ 11	\$ 10	\$ 32	\$ 26	\$ 43	\$ 36

(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 March 31, 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 14 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 March 31, 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 \$894 million and \$932 million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

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.

(in millions, except ratios)	Auto		Consumer & Business Banking ^(c)	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Loan delinquency				
Current	\$ 64,959	\$ 65,029	\$ 24,058	\$ 23,920
30-119 days past due	593	773	186	247
120 or more days past due	16	12	142	140
Total retained loans	\$ 65,568	\$ 65,814	\$ 24,386	\$ 24,307
% of 30+ days past due to total retained loans	0.93%	1.19%	1.35%	1.59%
Nonaccrual loans ^(a)	188	214	298	287
Geographic region				
California	\$ 8,178	\$ 7,975	\$ 4,523	\$ 4,426
Texas	6,906	7,041	2,909	2,954
New York	4,016	4,078	3,948	3,979
Illinois	4,116	3,984	1,831	1,758
Florida	3,337	3,374	1,226	1,195
Ohio	2,143	2,194	1,374	1,402
Arizona	2,189	2,209	1,313	1,307
Michigan	1,562	1,567	1,331	1,343
Louisiana	1,753	1,814	947	979
New Jersey	2,051	2,031	636	623
All other	29,317	29,547	4,348	4,341
Total retained loans	\$ 65,568	\$ 65,814	\$ 24,386	\$ 24,307
Loans by risk ratings^(b)				
Noncriticized	\$ 14,542	\$ 13,899	\$ 16,917	\$ 16,858
Criticized performing	127	201	819	816
Criticized nonaccrual	80	94	232	217

(a) There were no loans that were 90 or more days past due and still accruing interest at March 31, 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.

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.

(in millions)	March 31, 2017	December 31, 2016
Impaired loans		
With an allowance	\$ 384	\$ 614
Without an allowance ^(a)	37	30
Total impaired loans^{(b)(c)}	\$ 421	\$ 644
Allowance for loan losses related to impaired loans	\$ 97	\$ 119
Unpaid principal balance of impaired loans ^(d)	512	753
Impaired loans on nonaccrual status	373	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 \$650 million and \$571 million for the three months ended March 31, 2017 and 2016, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the three months ended March 31, 2017 and 2016.
- (d) Represents the contractual amount of principal owed at March 31, 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 months ended March 31, 2017 and 2016.

(in millions)	March 31, 2017	December 31, 2016
Loans modified in TDRs ^{(a)(b)}	\$ 132	\$ 362
TDRs on nonaccrual status	83	226

- (a) The impact of these modifications were not material to the Firm for the three months ended March 31, 2017 and 2016.
- (b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of March 31, 2017, and December 31, 2016, were immaterial.

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.

(in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Carrying value ^(a)	\$12,369	\$12,902	\$7,310	\$7,602	\$2,860	\$2,941	\$11,846	\$12,234	\$34,385	\$35,679
Related allowance for loan losses ^(b)	1,133	1,433	925	829	150	—	79	49	2,287	2,311
Loan delinquency (based on unpaid principal balance)										
Current	\$11,922	\$12,423	\$6,620	\$6,840	\$3,005	\$3,005	\$10,823	\$11,074	\$32,370	\$33,342
30-149 days past due	263	291	312	336	289	361	452	555	1,316	1,543
150 or more days past due	467	478	404	451	211	240	848	917	1,930	2,086
Total loans	\$12,652	\$13,192	\$7,336	\$7,627	\$3,505	\$3,606	\$12,123	\$12,546	\$35,616	\$36,971
% of 30+ days past due to total loans	5.77%	5.83%	9.76%	10.32%	14.27%	16.67%	10.72%	11.73%	9.11%	9.82%
Current estimated LTV ratios (based on unpaid principal balance)^{(c)(d)}										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	\$54	\$69	\$5	\$6	\$5	\$7	\$9	\$12	\$73	\$94
Less than 660	31	39	17	17	27	31	14	18	89	105
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	436	555	34	52	31	39	65	83	566	729
Less than 660	214	256	68	84	108	135	113	144	503	619
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	1,679	1,860	347	442	176	214	456	558	2,658	3,074
Less than 660	750	804	329	381	399	439	519	609	1,997	2,233
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	6,579	6,676	3,920	3,967	927	919	6,662	6,754	18,088	18,316
Less than 660	2,192	2,183	2,242	2,287	1,661	1,645	3,733	3,783	9,828	9,898
No FICO/LTV available	717	750	374	391	171	177	552	585	1,814	1,903
Total unpaid principal balance	\$12,652	\$13,192	\$7,336	\$7,627	\$3,505	\$3,606	\$12,123	\$12,546	\$35,616	\$36,971
Geographic region (based on unpaid principal balance)										
California	\$7,562	\$7,899	\$4,218	\$4,396	\$875	\$899	\$6,904	\$7,128	\$19,559	\$20,322
Florida	1,264	1,306	478	501	324	332	985	1,026	3,051	3,165
New York	676	697	503	515	356	363	692	711	2,227	2,286
Washington	637	673	161	167	67	68	278	290	1,143	1,198
New Jersey	269	280	203	210	121	125	381	401	974	1,016
Illinois	305	314	218	226	174	178	273	282	970	1,000
Massachusetts	91	94	166	173	108	110	332	346	697	723
Maryland	62	64	140	144	141	145	261	267	604	620
Arizona	231	241	119	124	66	68	173	181	589	614
Virginia	74	77	138	142	54	56	306	314	572	589
All other	1,481	1,547	992	1,029	1,219	1,262	1,538	1,600	5,230	5,438
Total unpaid principal balance	\$12,652	\$13,192	\$7,336	\$7,627	\$3,505	\$3,606	\$12,123	\$12,546	\$35,616	\$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.

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 March 31, 2017, and December 31, 2016.

(in millions, except ratios)	Total loans		Total 30+ day delinquency rate	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
HELOCs: ^(a)				
Within the revolving period ^(b)	\$ 1,503	\$ 2,126	3.79%	3.67%
Beyond the revolving period ^(c)	7,667	7,452	3.89	4.03
HELOANS	437	465	4.58	5.38
Total	\$ 9,607	\$ 10,043	3.90%	4.01%

(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.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the three months ended March 31, 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.

(in millions, except ratios)	Total PCI	
	Three months ended March 31, 2017	2016
Beginning balance	\$ 11,768	\$ 13,491
Accretion into interest income	(359)	(407)
Changes in interest rates on variable-rate loans	116	76
Other changes in expected cash flows ^(a)	1,597	(486)
Balance at March 31	\$ 13,122	\$ 12,674
Accretable yield percentage	4.36%	4.35%

(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 March 31, 2017, and December 31, 2016, the Firm had PCI residential real estate loans with an unpaid principal balance of \$1.6 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

The table below sets forth information about the Firm's credit card loans.

(in millions, except ratios)	March 31, 2017	December 31, 2016
Loan delinquency		
Current and less than 30 days past due and still accruing	\$ 132,682	\$ 139,434
30-89 days past due and still accruing	1,066	1,134
90 or more days past due and still accruing	1,169	1,143
Total retained credit card loans	\$ 134,917	\$ 141,711
Loan delinquency ratios		
% of 30+ days past due to total retained loans	1.66%	1.61%
% of 90+ days past due to total retained loans	0.87	0.81
Credit card loans by geographic region		
California	\$ 19,769	\$ 20,571
Texas	12,801	13,220
New York	11,733	12,249
Florida	8,263	8,585
Illinois	7,758	8,189
New Jersey	5,893	6,271
Ohio	4,583	4,906
Pennsylvania	4,459	4,787
Colorado	3,543	3,699
Michigan	3,487	3,741
All other	52,628	55,493
Total retained credit card loans	\$ 134,917	\$ 141,711
Percentage of portfolio based on carrying value with estimated refreshed FICO scores^(a)		
Equal to or greater than 660	83.5%	84.4%
Less than 660	15.2	14.2
No FICO available	1.3	1.4

(a) The current period percentage of portfolio based on carrying value with estimated refreshed FICO scores disclosures have been updated to reflect where the FICO score is unavailable.

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.

(in millions)	March 31, 2017	December 31, 2016
Impaired credit card loans with an allowance^{(a),(b)}		
Credit card loans with modified payment terms ^(c)	\$ 1,089	\$ 1,098
Modified credit card loans that have reverted to pre-modification payment terms ^(d)	130	142
Total impaired credit card loans^(e)	\$ 1,219	\$ 1,240
Allowance for loan losses related to impaired credit card loans	\$ 373	\$ 358

(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 March 31, 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 \$45 million and \$48 million at March 31, 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.

(in millions)	Three months ended March 31,	
	2017	2016
Average impaired credit card loans	\$ 1,228	\$ 1,436
Interest income on impaired credit card loans	14	17

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 \$185 million and \$159 million, for the three months ended March 31, 2017 and 2016, respectively. For additional information about credit card loan modifications, see Note 14 of JPMorgan Chase's 2016 Annual Report.

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.

(in millions, except weighted-average data)	Three months ended March 31,	
	2017	2016
Weighted-average interest rate of loans - before TDR	16.16%	15.48%
Weighted-average interest rate of loans - after TDR	4.77	4.76
Loans that redefaulted within one year of modification ^(a)	\$ 21	\$ 19

(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 30.60% and 28.87% as of March 31, 2017, and December 31, 2016, respectively.

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 of JPMorgan 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 holding company's primary business activity. In the tables below, the prior period amounts have been revised to conform with the current period presentation.

(in millions, except ratios)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other ^(d)		Total retained loans	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Loans by risk ratings												
Investment-grade	\$ 68,318	\$ 65,687	\$ 90,688	\$ 88,649	\$ 20,763	\$ 24,294	\$ 15,650	\$ 15,935	\$ 97,616	\$ 95,358	\$ 293,035	\$ 289,923
Noninvestment-grade:												
Noncriticized	47,208	47,531	16,340	16,155	11,598	11,075	402	439	9,005	9,360	84,553	84,560
Criticized performing	5,986	6,186	875	798	181	200	1	6	168	163	7,211	7,353
Criticized nonaccrual	1,158	1,491	167	200	3	9	—	—	243	254	1,571	1,954
Total noninvestment-grade	54,352	55,208	17,382	17,153	11,782	11,284	403	445	9,416	9,777	93,335	93,867
Total retained loans	\$122,670	\$ 120,895	\$ 108,070	\$105,802	\$ 32,545	\$ 35,578	\$ 16,053	\$ 16,380	\$107,032	\$ 105,135	\$ 386,370	\$ 383,790
% of total criticized exposure to total retained loans	5.82%	6.35%	0.96%	0.94%	0.57%	0.59%	0.01%	0.04%	0.38%	0.40%	2.27%	2.43%
% of criticized nonaccrual to total retained loans	0.94	1.23	0.15	0.19	0.01	0.03	—	—	0.23	0.24	0.41	0.51
Loans by geographic distribution^(a)												
Total non-U.S.	\$ 29,461	\$ 30,563	\$ 3,085	\$ 3,302	\$ 14,414	\$ 15,147	\$ 3,768	\$ 3,726	\$ 40,067	\$ 38,776	\$ 90,795	\$ 91,514
Total U.S.	93,209	90,332	104,985	102,500	18,131	20,431	12,285	12,654	66,965	66,359	295,575	292,276
Total retained loans	\$122,670	\$ 120,895	\$ 108,070	\$105,802	\$ 32,545	\$ 35,578	\$ 16,053	\$ 16,380	\$107,032	\$ 105,135	\$ 386,370	\$ 383,790
Loan delinquency^(b)												
Current and less than 30 days past due and still accruing	\$121,087	\$ 119,050	\$ 107,699	\$105,396	\$ 32,489	\$ 35,523	\$ 16,045	\$ 16,269	\$105,808	\$ 104,280	\$ 383,128	\$ 380,518
30-89 days past due and still accruing	323	268	202	204	34	25	6	107	974	582	1,539	1,186
90 or more days past due and still accruing ^(c)	102	86	2	2	19	21	2	4	7	19	132	132
Criticized nonaccrual	1,158	1,491	167	200	3	9	—	—	243	254	1,571	1,954
Total retained loans	\$122,670	\$ 120,895	\$ 108,070	\$105,802	\$ 32,545	\$ 35,578	\$ 16,053	\$ 16,380	\$107,032	\$ 105,135	\$ 386,370	\$ 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 of 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.

(in millions, except ratios)	Multifamily		Other commercial		Total real estate loans	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Real estate retained loans	\$ 73,786	\$ 72,143	\$ 34,284	\$ 33,659	\$ 108,070	\$ 105,802
Criticized exposure	479	539	563	459	1,042	998
% of total criticized exposure to total real estate retained loans	0.65%	0.75%	1.64%	1.36%	0.96%	0.94%
Criticized nonaccrual	\$ 43	\$ 57	\$ 124	\$ 143	\$ 167	\$ 200
% of criticized nonaccrual loans to total real estate retained loans	0.06%	0.08%	0.36%	0.42%	0.15%	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.

(in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Impaired loans												
With an allowance	\$ 660	\$ 1,127	\$ 100	\$ 124	\$ 3	\$ 9	\$ -	\$ -	\$ 172	\$ 180	\$ 935	\$ 1,440
Without an allowance ^(a)	585	414	75	87	14	-	-	-	72	76	746	577
Total impaired loans	\$ 1,245	\$ 1,541	\$ 175	\$ 211	\$ 17	\$ 9	\$ -	\$ -	\$ 244	\$ 256	\$ 1,681	\$ 2,017
Allowance for loan losses related to impaired loans	\$ 168	\$ 260	\$ 14	\$ 18	\$ 7	\$ 3	\$ -	\$ -	\$ 60	\$ 61	\$ 249	\$ 342
Unpaid principal balance of impaired loans ^(b)	1,477	1,754	254	295	13	12	-	-	175	284	1,919	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 March 31, 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.

(in millions)	Three months ended March 31,	
	2017	2016
Commercial and industrial	\$ 1,097	\$ 1,123
Real estate	172	233
Financial institutions	4	11
Government agencies	-	-
Other	202	181
Total^(a)	\$ 1,475	\$ 1,548

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the three months ended March 31, 2017 and 2016.

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 \$842 million and \$733 million as of March 31, 2017, and December 31, 2016, respectively.

Note 13 – 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.

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.

Three months ended March 31, (in millions)	2017				2016			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses								
Beginning balance at January 1,	\$ 5,198	\$ 4,034	\$ 4,544	\$ 13,776	5,806	\$ 3,434	\$ 4,315	\$ 13,555
Gross charge-offs	847	1,086	26	1,959	365	923	69	1,357
Gross recoveries	(159)	(93)	(53)	(305)	(145)	(93)	(9)	(247)
Net charge-offs/(recoveries)	688	993	(27)	1,654	220	830	60	1,110
Write-offs of PCI loans ^(a)	24	–	–	24	47	–	–	47
Provision for loan losses	442	993	(119)	1,316	221	830	545	1,596
Other	(2)	–	1	(1)	–	–	–	–
Ending balance at March 31,	\$ 4,926	\$ 4,034	\$ 4,453	\$ 13,413	\$ 5,760	\$ 3,434	\$ 4,800	\$ 13,994
Allowance for loan losses by impairment methodology								
Asset-specific ^(b)	\$ 300	\$ 373	^(c) \$ 249	\$ 922	\$ 371	\$ 427	^(c) \$ 565	\$ 1,363
Formula-based	2,339	3,661	4,204	10,204	2,694	3,007	4,235	9,936
PCI	2,287	–	–	2,287	2,695	–	–	2,695
Total allowance for loan losses	\$ 4,926	\$ 4,034	\$ 4,453	\$ 13,413	\$ 5,760	\$ 3,434	\$ 4,800	\$ 13,994
Loans by impairment methodology								
Asset-specific	\$ 8,604	\$ 1,219	\$ 1,681	\$ 11,504	\$ 9,468	\$ 1,381	\$ 2,230	\$ 13,079
Formula-based	317,594	133,698	384,686	835,978	304,660	124,631	362,078	791,369
PCI	34,385	–	3	34,388	39,743	–	4	39,747
Total retained loans	\$ 360,583	\$ 134,917	\$ 386,370	\$ 881,870	\$ 353,871	\$ 126,012	\$ 364,312	\$ 844,195
Impaired collateral-dependent loans								
Net charge-offs	\$ 31	\$ –	\$ 1	\$ 32	\$ 21	\$ –	\$ 1	\$ 22
Loans measured at fair value of collateral less cost to sell	2,345	–	264	2,609	2,514	–	384	2,898
Allowance for lending-related commitments								
Beginning balance at January 1,	\$ 26	\$ –	\$ 1,052	\$ 1,078	\$ 14	\$ –	\$ 772	\$ 786
Provision for lending-related commitments	–	–	(1)	(1)	–	–	228	228
Other	–	–	–	–	–	–	–	–
Ending balance at March 31,	\$ 26	\$ –	\$ 1,051	\$ 1,077	\$ 14	\$ –	\$ 1,000	\$ 1,014
Allowance for lending-related commitments by impairment methodology								
Asset-specific	\$ –	\$ –	\$ 228	\$ 228	\$ –	\$ –	\$ 192	\$ 192
Formula-based	26	–	823	849	14	–	808	822
Total allowance for lending-related commitments	\$ 26	\$ –	\$ 1,051	\$ 1,077	\$ 14	\$ –	\$ 1,000	\$ 1,014
Lending-related commitments by impairment methodology								
Asset-specific	\$ –	\$ –	\$ 882	\$ 882	\$ –	\$ –	\$ 722	\$ 722
Formula-based	53,594	577,096	363,638	994,328	60,744	532,224	366,744	959,712
Total lending-related commitments	\$ 53,594	\$ 577,096	\$ 364,520	\$ 995,210	\$ 60,744	\$ 532,224	\$ 367,466	\$ 960,434

Note: In the first quarter of 2017, the Firm transferred the student loan portfolio to held-for-sale. For additional information see Note 24.

- (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.

Note 14 – 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.

Line of Business	Transaction Type	Activity	Form 10-Q page reference
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	124
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	124-126
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, and student loans	124-126
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	126
	Investor intermediation activities		

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 126 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 128 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 of JPMorgan Chase’s 2016 Annual Report.

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 128 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and page 128 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs ^{(c)(d)(e)}		
	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
March 31, 2017 (in millions)						
Securitization-related^(a)						
Residential mortgage:						
Prime/Alt-A and option ARMs	\$ 74,349	\$ 4,056	\$ 55,425	\$ 130	\$ 1,224	\$ 1,354
Subprime	20,940	–	19,352	89	–	89
Commercial and other ^(b)	95,347	95	59,974	574	1,705	2,279
Total	\$ 190,636	\$ 4,151	\$ 134,751	\$ 793	\$ 2,929	\$ 3,722

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs ^{(c)(d)(e)}		
	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
December 31, 2016 (in millions)						
Securitization-related^(a)						
Residential mortgage:						
Prime/Alt-A and option ARMs	\$ 76,789	\$ 4,209	\$ 57,543	\$ 226	\$ 1,334	\$ 1,560
Subprime	21,542	–	19,903	76	–	76
Commercial and other ^(b)	101,265	107	71,464	509	2,064	2,573
Total	\$ 199,596	\$ 4,316	\$ 148,910	\$ 811	\$ 3,398	\$ 4,209

- (a) Excludes U.S. government agency securitizations and re-securitizations, which are not Firm-sponsored. See page 128 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 15 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 \$202 million and \$38 million, respectively, at March 31, 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) As of March 31, 2017, and December 31, 2016, 61% 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 \$26 million and \$77 million of noninvestment-grade retained interests at March 31, 2017, and December 31, 2016, respectively. The retained interests in commercial and other securitizations trusts consisted of \$2.0 billion and \$2.4 billion of investment-grade and \$249 million and \$210 million of noninvestment-grade retained interests at March 31, 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 128 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 JPMorgan Chase's 2016 Annual Report. See the table on page 128 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 of JPMorgan Chase's 2016 Annual Report.

The following table represents the transfers of securities to re-securitization VIEs.

(in millions)	Three months ended March 31,	
	2017	2016
Transfers of securities to VIEs		
Agency	\$ 3,224	\$ 2,856

During the three months ended March 31, 2017 and 2016, the Firm did not transfer any securities to Firm-sponsored private-label VIEs.

The following table represents information on nonconsolidated re-securitization VIEs.

(in millions)	Nonconsolidated re-securitization VIEs	
	Mar 31, 2017	Dec 31, 2016
Firm-sponsored private-label		
Assets held in VIEs with continuing involvement ^(a)	\$ 2,223	\$ 875
Interest in VIEs	27	43
Agency		
Interest in VIEs	2,412	1,986

(a) Includes the notional amount of interest-only securities.

As of March 31, 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 \$21.2 billion of the commercial paper issued by the Firm-administered multi-seller conduits at both March 31, 2017, and December 31, 2016, 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 \$7.0 billion and \$7.4 billion at March 31, 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 20.

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 March 31, 2017 and December 31, 2016, was \$421 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 March 31, 2017, and December 31, 2016.

March 31, 2017 (in millions)	Assets				Liabilities		
	Trading assets	Loans	Other ^(c)	Total assets ^(d)	Beneficial interests in VIE assets ^(e)	Other ^(f)	Total liabilities
VIE program type^(a)							
Firm-sponsored credit card trusts	\$ –	\$ 42,049	\$ 752	\$ 42,801	\$ 28,742	\$ 18	\$ 28,760
Firm-administered multi-seller conduits	–	24,215	45	24,260	3,089	32	3,121
Municipal bond vehicles	2,622	–	9	2,631	2,746	2	2,748
Mortgage securitization entities ^(b)	136	4,115	69	4,320	458	295	753
Student loan securitization entities	–	1,624	63	1,687	1,472	4	1,476
Other	88	–	2,224	2,312	175	116	291
Total	\$ 2,846	\$ 72,003	\$ 3,162	\$ 78,011	\$ 36,682	\$ 467	\$ 37,149

December 31, 2016 (in millions)	Assets				Liabilities		
	Trading assets	Loans	Other ^(c)	Total assets ^(d)	Beneficial interests in VIE assets ^(e)	Other ^(f)	Total liabilities
VIE program type^(a)							
Firm-sponsored credit card trusts	\$ –	\$ 45,919	\$ 790	\$ 46,709	\$ 31,181	\$ 18	\$ 31,199
Firm-administered multi-seller conduits	–	23,760	43	23,803	2,719	33	2,752
Municipal bond vehicles	2,897	–	8	2,905	2,969	2	2,971
Mortgage securitization entities ^(b)	143	4,246	103	4,492	468	313	781
Student loan securitization entities	–	1,689	59	1,748	1,527	4	1,531
Other	145	–	2,318	2,463	183	120	303
Total	\$ 3,185	\$ 75,614	\$ 3,321	\$ 82,120	\$ 39,047	\$ 490	\$ 39,537

(a) Excludes intercompany transactions which are eliminated in consolidation.

(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.

(c) Includes assets classified as cash and other assets on the Consolidated balance sheets.

(d) 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.

(e) 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 \$30.8 billion and \$33.4 billion at March 31, 2017, and December 31, 2016, respectively. The maturities of the long-term beneficial interests as of March 31, 2017, were as follows: \$11.9 billion under one year, \$16.3 billion between one and five years, and \$2.6 billion over five years.

(f) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

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 months ended March 31, 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.

(in millions)	Three months ended March 31,			
	2017		2016	
	Residential mortgage ^(c)	Commercial and other ^(d)	Residential mortgage ^(c)	Commercial and other ^(d)
Principal securitized	\$ 1,029	\$ 1,315	\$ —	\$ 1,324
All cash flows during the period:^(a)				
Proceeds from loan sales as securities				
Level 2	\$ 1,035	\$ 1,348	\$ —	\$ 1,311
Level 3	\$ —	\$ —	\$ —	\$ —
Total proceeds received from loan sales	\$ 1,035	\$ 1,348	\$ —	\$ 1,311
Servicing fees collected	133	1	112	1
Purchases of previously transferred financial assets (or the underlying collateral) ^(b)	—	—	37	—
Cash flows received on interests	131	335	94	273

(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 MSR's 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 MSR's on a nonrecourse basis, predominantly to U.S. government-sponsored enterprises ("U.S. GSEs"). These loans and excess MSR's 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 20 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 15 for additional information about the impact of the Firm's sale of certain excess MSR's. 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.

(in millions)	Three months ended March 31,	
	2017	2016
Carrying value of loans sold	\$ 17,169	\$ 9,012
Proceeds received from loan sales as cash	9	4
Proceeds received from loan sales as securities ^(a)	16,987	8,955
Total proceeds received from loan sales^(b)	\$ 16,996	\$ 8,959
Gains on loan sales ^{(c)(d)}	\$ 31	\$ 50

(a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.

(b) Excludes the value of MSR's retained upon the sale of loans.

(c) Gains on loan sales include the value of MSR's.

(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

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 12 of this Form 10-Q and Note 14 of JPMorgan Chase's 2016 Annual Report.

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 March 31, 2017 and December 31, 2016. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

(in millions)	Mar 31, 2017	Dec 31, 2016
Loans repurchased or option to repurchase ^(a)	\$ 9,364	\$ 9,556
Real estate owned	121	142
Foreclosed government-guaranteed residential mortgage loans ^(b)	948	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.

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 March 31, 2017, and December 31, 2016.

(in millions)	Securitized assets		90 days past due		Liquidation losses	
					Three months ended March 31,	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	2017	2016
Securitized loans						
Residential mortgage:						
Prime / Alt-A & option ARMs	\$ 55,425	\$ 57,543	\$ 5,768	\$ 6,169	\$ 212	\$ 340
Subprime	19,352	19,903	3,964	4,186	175	322
Commercial and other	59,974	71,464	1,673	1,755	52	393
Total loans securitized	\$ 134,751	\$ 148,910	\$ 11,405	\$ 12,110	\$ 439	\$ 1,055

Note 15 – 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.

The following table presents goodwill attributed to the business segments.

(in millions)	March 31, 2017	December 31, 2016
Consumer & Community Banking	\$ 30,797	\$ 30,797
Corporate & Investment Bank	6,775	6,772
Commercial Banking	2,861	2,861
Asset & Wealth Management	6,859	6,858
Total goodwill	\$ 47,292	\$ 47,288

The following table presents changes in the carrying amount of goodwill.

(in millions)	Three months ended March 31,	
	2017	2016
Balance at beginning of period	\$ 47,288	\$ 47,325
Changes during the period from:		
Business combinations	–	–
Dispositions ^(a)	–	(71)
Other ^(b)	4	56
Balance at March 31,	\$ 47,292	\$ 47,310

(a) During the three months ended March 31, 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.

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 March 31, 2017, or December 31, 2016, nor was goodwill written off due to impairment during the three months ended March 31, 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.

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 of JPMorgan Chase's 2016 Annual Report and Note 2 of this Form 10-Q.

The following table summarizes MSR activity for the three months ended March 31, 2017 and 2016.

(in millions, except where otherwise noted)	As of or for the three months ended March 31,	
	2017	2016
Fair value at beginning of period	\$ 6,096	\$ 6,608
MSR activity:		
Originations of MSRs	217	107
Purchase of MSRs	—	—
Disposition of MSRs ^(a)	(71)	(64)
Net additions	146	43
Changes due to collection/realization of expected cash flows	(206)	(241)
Changes in valuation due to inputs and assumptions:		
Changes due to market interest rates and other ^(b)	57	(762)
Changes in valuation due to other inputs and assumptions:		
Projected cash flows (e.g., cost to service)	12	7
Discount rates	(12)	7
Prepayment model changes and other ^(c)	(14)	(4)
Total changes in valuation due to other inputs and assumptions	(14)	10
Total changes in valuation due to inputs and assumptions	43	(752)
Fair value at March 31,	\$ 6,079	\$ 5,658
Change in unrealized gains/(losses) included in income related to MSRs held at March 31,	\$ 43	\$ (752)
Contractual service fees, late fees and other ancillary fees included in income	487	561
Third-party mortgage loans serviced at March 31, (in billions)	584	658
Net servicer advances at March 31, (in billions) ^(d)	4.4	6.1

(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.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the three months ended March 31, 2017 and 2016.

(in millions)	Three months ended March 31,	
	2017	2016
CCB mortgage fees and related income		
Net production revenue	\$ 141	\$ 162
Net mortgage servicing revenue:		
Operating revenue:		
Loan servicing revenue	522	616
Changes in MSR asset fair value due to collection/realization of expected cash flows	(205)	(240)
Total operating revenue	317	376
Risk management:		
Changes in MSR asset fair value due to market interest rates and other ^(a)	57	(762)
Other changes in MSR asset fair value due to other inputs and assumptions in model ^(b)	(14)	10
Change in derivative fair value and other	(95)	881
Total risk management	(52)	129
Total net mortgage servicing revenue	265	505
Total CCB mortgage fees and related income	406	667
All other	—	—
Mortgage fees and related income	\$ 406	\$ 667

(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 March 31, 2017, and December 31, 2016, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

(in millions, except rates)	Mar 31, 2017	Dec 31, 2016
Weighted-average prepayment speed assumption ("CPR")	9.19%	9.41%
Impact on fair value of 10% adverse change	\$ (222)	\$ (231)
Impact on fair value of 20% adverse change	(428)	(445)
Weighted-average option adjusted spread	8.60%	8.55%
Impact on fair value of a 100 basis point adverse change	\$ (247)	\$ (248)
Impact on fair value of a 200 basis point adverse change	(476)	(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.

Note 16 – Deposits

For further discussion on deposits, see Note 19 of JPMorgan Chase’s 2016 Annual Report.

At March 31, 2017, and December 31, 2016, noninterest-bearing and interest-bearing deposits were as follows.

(in millions)	March 31, 2017	December 31, 2016
U.S. offices		
Noninterest-bearing	\$ 400,439	\$ 400,831
Interest-bearing (included \$13,627 and \$12,245 at fair value) ^(a)	775,258	737,949
Total deposits in U.S. offices	1,175,697	1,138,780
Non-U.S. offices		
Noninterest-bearing	16,456	14,764
Interest-bearing (included \$2,755 and \$1,667 at fair value) ^(a)	230,846	221,635
Total deposits in non-U.S. offices	247,302	236,399
Total deposits	\$1,422,999	\$ 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.

Note 17 – 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 months ended March 31, 2017 and 2016.

(in millions, except per share amounts)	Three months ended March 31,	
	2017	2016
Basic earnings per share		
Net income	\$ 6,448	\$ 5,520
Less: Preferred stock dividends	412	412
Net income applicable to common equity	6,036	5,108
Less: Dividends and undistributed earnings allocated to participating securities ^(a)	61	62
Net income applicable to common stockholders^(a)	\$ 5,975	\$ 5,046
Total weighted-average basic shares outstanding ^(a)	3,601.7	3,710.6
Net income per share	\$ 1.66	\$ 1.36
Diluted earnings per share		
Net income applicable to common stockholders^(a)	\$ 5,975	\$ 5,046
Total weighted-average basic shares outstanding ^(a)	3,601.7	3,710.6
Add: Employee stock options, SARs, warrants and vested PSUs	28.7	27.0
Total weighted-average diluted shares outstanding^{(a)(b)}	3,630.4	3,737.6
Net income per share	\$ 1.65	\$ 1.35

- (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.
- (b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 18 – 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 three months ended March 31, 2017 (in millions)	Unrealized gains on investment securities ^(a)	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at January 1, 2017	\$ 1,524	\$ (164)	\$ (100)	\$ (2,259)	\$ (176)	\$ (1,175)
Net change	238	7	91	(15)	(69)	252
Balance at March 31, 2017	\$ 1,762	\$ (157)	\$ (9)	\$ (2,274)	\$ (245)	\$ (923)

As of or for the three months ended March 31, 2016 (in millions)	Unrealized gains on investment securities ^(a)	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at January 1, 2016	\$ 2,629	\$ (162)	\$ (44)	\$ (2,231)	NA	\$ 192
Cumulative effect of change in accounting principle ^(b)	–	–	–	–	154	154
Net change	425	(2)	(70)	25	58	436
Balance at March 31, 2016	\$ 3,054	\$ (164)	\$ (114)	\$ (2,206)	\$ 212	\$ 782

(a) 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.

(b) 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.

The following table presents the pre-tax and after-tax changes in the components of OCI.

Three months ended March 31, (in millions)	2017			2016		
	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:						
Net unrealized gains/(losses) arising during the period	\$ 367	\$ (131)	\$ 236	\$ 732	\$ (275)	\$ 457
Reclassification adjustment for realized (gains)/losses included in net income ^(a)	3	(1)	2	(51)	19	(32)
Net change	370	(132)	238	681	(256)	425
Translation adjustments^(b):						
Translation	582	(225)	357	589	(220)	369
Hedges	(556)	206	(350)	(590)	219	(371)
Net change	26	(19)	7	(1)	(1)	(2)
Cash flow hedges:						
Net unrealized gains/(losses) arising during the period	59	(21)	38	(167)	63	(104)
Reclassification adjustment for realized (gains)/losses included in net income ^(c)	85	(32)	53	55	(21)	34
Net change	144	(53)	91	(112)	42	(70)
Defined benefit pension and OPEB plans:						
Net gains/(losses) arising during the period	(58)	21	(37)	(23)	9	(14)
Reclassification adjustments included in net income ^(d) :						
Amortization of net loss	62	(23)	39	64	(24)	40
Prior service costs/(credits)	(9)	3	(6)	(9)	4	(5)
Settlement loss/(gain)	(3)	1	(2)	–	–	–
Foreign exchange and other	(7)	(2)	(9)	6	(2)	4
Net change	(15)	–	(15)	38	(13)	25
DVA on fair value option elected liabilities, net change:	(107)	38	(69)	92	(34)	58
Total other comprehensive income/(loss)	\$ 418	\$ (166)	\$ 252	\$ 698	\$ (262)	\$ 436

(a) The pre-tax amount is reported in securities gains in the Consolidated statements of income.

(b) Reclassifications of pre-tax realized gains/(losses) 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.

Note 19 – 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, 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 presents two comprehensive methodologies for calculating RWA, a general (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 (“Basel III Transitional”).

There are three categories of risk-based capital under the Basel III Transitional rules: CET1 capital, Tier 1 capital and Tier 2 capital. CET1 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 CET1 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 Basel III Standardized Transitional and Basel III Advanced Transitional at March 31, 2017, and December 31, 2016.

(in millions, except ratios)	JPMorgan Chase & Co.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Regulatory capital				
CET1 capital	\$ 184,337	\$ 182,967	\$ 184,337	\$ 182,967
Tier 1 capital ^(a)	209,653	208,112	209,653	208,112
Total capital	240,222	239,553	229,436	228,592
Assets				
Risk-weighted	1,468,931	1,464,981	1,467,992	1,476,915
Adjusted average ^(b)	2,486,114	2,484,631	2,486,114	2,484,631
Capital ratios^(c)				
CET1	12.5%	12.5%	12.6%	12.4%
Tier 1 ^(a)	14.3	14.2	14.3	14.1
Total	16.4	16.4	15.6	15.5
Tier 1 leverage ^(d)	8.4	8.4	8.4	8.4

(in millions, except ratios)	JPMorgan Chase Bank, N.A.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Regulatory capital				
CET1 capital	\$ 181,576	\$ 179,319	\$ 181,576	\$ 179,319
Tier 1 capital ^(a)	181,576	179,341	181,576	179,341
Total capital	193,472	191,662	186,495	184,637
Assets				
Risk-weighted	1,288,986	1,293,203	1,248,080	1,262,613
Adjusted average ^(b)	2,081,893	2,088,851	2,081,893	2,088,851
Capital ratios^(c)				
CET1	14.1%	13.9%	14.5%	14.2%
Tier 1 ^(a)	14.1	13.9	14.5	14.2
Total	15.0	14.8	14.9	14.6
Tier 1 leverage ^(d)	8.7	8.6	8.7	8.6

(in millions, except ratios)	Chase Bank USA, N.A.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
	Mar 31, 2017	Dec 31, 2016	Mar 31, 2017	Dec 31, 2016
Regulatory capital				
CET1 capital	\$ 17,200	\$ 16,784	\$ 17,200	\$ 16,784
Tier 1 capital ^(a)	17,200	16,784	17,200	16,784
Total capital	23,200	22,862	21,850	21,434
Assets				
Risk-weighted	106,234	112,297	189,198	186,378
Adjusted average ^(b)	123,192	120,304	123,192	120,304
Capital ratios^(c)				
CET1	16.2%	14.9%	9.1%	9.0%
Tier 1 ^(a)	16.2	14.9	9.1	9.0
Total	21.8	20.4	11.5	11.5
Tier 1 leverage ^(d)	14.0	14.0	14.0	14.0

- (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 March 31, 2017.
- (b) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) 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 Basel III approach, Standardized or Advanced, which results in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.
- (d) The Tier 1 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 CET1, 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 March 31, 2017.

	Minimum capital ratios		Well-capitalized ratios	
	BHC ^{(a)(e)}	IDI ^{(b)(e)}	BHC ^(c)	IDI ^(d)
Capital ratios				
CET1	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 March 31, 2017. At March 31, 2017, the CET1 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 CET1 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 CET1, 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 CET1, 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 March 31, 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 20 – 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 or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual 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 13 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 March 31, 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 are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

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

	Contractual amount					Carrying value ^(h)			
	March 31, 2017					Dec 31, 2016	Mar 31, 2017	Dec 31, 2016	
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total			
By remaining maturity (in millions)									
Lending-related									
Consumer, excluding credit card:									
Home equity	\$ 4,271	\$ 2,537	\$ 1,043	\$ 13,938	\$ 21,789	\$ 21,714	\$ 12	\$ 12	
Residential mortgage ^{(a)(b)}	10,356	–	–	12	10,368	11,882	–	–	
Auto	7,289	687	187	29	8,192	8,468	2	2	
Consumer & Business Banking ^(b)	11,815	859	100	471	13,245	12,733	12	12	
Total consumer, excluding credit card	\$ 33,731	\$ 4,083	\$ 1,330	\$ 14,450	\$ 53,594	\$ 54,797	\$ 26	\$ 26	
Credit card	\$ 577,096	–	–	–	\$ 577,096	\$ 553,891	–	–	
Total consumer^(c)	\$ 610,827	\$ 4,083	\$ 1,330	\$ 14,450	\$ 630,690	\$ 608,688	\$ 26	\$ 26	
Wholesale:									
Other unfunded commitments to extend credit ^(d)	\$ 68,191	\$ 113,420	\$ 137,637	\$ 7,459	\$ 326,707	\$ 328,497	\$ 903	\$ 905	
Standby letters of credit and other financial guarantees ^(d)	15,079	11,815	6,769	1,122	34,785	35,947	578	586	
Other letters of credit ^(d)	2,791	116	121	–	3,028	3,570	2	2	
Total wholesale^(e)	\$ 86,061	\$ 125,351	\$ 144,527	\$ 8,581	\$ 364,520	\$ 368,014	\$ 1,483	\$ 1,493	
Total lending-related	\$ 696,888	\$ 129,434	\$ 145,857	\$ 23,031	\$ 995,210	\$ 976,702	\$ 1,509	\$ 1,519	
Other guarantees and commitments									
Securities lending indemnification agreements and guarantees ^(f)	\$ 148,343	–	–	–	\$ 148,343	\$ 137,209	–	–	
Derivatives qualifying as guarantees	2,008	112	10,829	39,621	52,570	51,966	287	80	
Unsettled reverse repurchase and securities borrowing agreements	96,489	–	–	–	96,489	50,722	–	–	
Unsettled repurchase and securities lending agreements	82,889	–	–	–	82,889	26,948	–	–	
Loan sale and securitization-related indemnifications:									
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	133	133	
Loans sold with recourse	NA	NA	NA	NA	2,286	2,730	59	64	
Other guarantees and commitments ^(g)	243	2,624	1,015	1,652	5,534	5,715	(109)	(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 March 31, 2017, and December 31, 2016, reflected the contractual amount net of risk participations totaling \$355 million and \$328 million, respectively, for other unfunded commitments to extend credit; \$10.4 billion and \$11.1 billion, respectively, for standby letters of credit and other financial guarantees; and \$330 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 March 31, 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 March 31, 2017, and December 31, 2016, collateral held by the Firm in support of securities lending indemnification agreements was \$155.4 billion and \$143.2 billion, respectively. Securities lending collateral consists of primarily 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 \$48 million at both March 31, 2017, and December 31, 2016, to third-party private equity funds; and \$837 million and \$1.0 billion, at March 31, 2017, and December 31, 2016, respectively, to other equity investments. These commitments included \$32 million and \$34 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 \$4.6 billion at both March 31, 2017, and December 31, 2016.

(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.

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 March 31, 2017, and December 31, 2016, the secured clearance advance facility maximum outstanding commitment amount was \$2.4 billion for both periods.

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 March 31, 2017, and December 31, 2016.

Standby letters of credit, other financial guarantees and other letters of credit

(in millions)	March 31, 2017		December 31, 2016	
	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade ^(a)	\$ 26,962	\$ 2,066	\$ 28,245	\$ 2,781
Noninvestment-grade ^(a)	7,823	962	7,702	789
Total contractual amount	\$ 34,785	\$ 3,028	\$ 35,947	\$ 3,570
Allowance for lending-related commitments	\$ 146	\$ 2	\$ 145	\$ 2
Guarantee liability	432	–	441	–
Total carrying value	\$ 578	\$ 2	\$ 586	\$ 2
Commitments with collateral	\$ 19,093	\$ 834	\$ 19,346	\$ 940

(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 JPMorgan Chase's 2016 Annual Report.

The following table summarizes the derivatives qualifying as guarantees as of March 31, 2017, and December 31, 2016.

(in millions)	March 31, 2017	December 31, 2016
Total notional value of derivatives ^(a)	52,570	51,966
Notional amount of stable value contracts ^(b)	28,779	28,665
Maximum exposure to loss on stable value contracts	3,020	3,012
Fair value^(c)		
Derivative payables	301	96
Derivative receivables	14	16

(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 22 of this Form 10-Q and Note 31 of JPMorgan 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 21 – Pledged assets and collateral

For a discussion of the Firm's pledged assets and collateral, see Note 30 of JPMorgan 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.

(in billions)	March 31, 2017	December 31, 2016
Assets that may be sold or repledged or otherwise used by secured parties	\$ 166.9	\$ 133.6
Assets that may not be sold or repledged or otherwise used by secured parties	59.4	53.5
Assets pledged at Federal Reserve banks and FHLBs	450.0	441.9
Total assets pledged	\$ 676.3	\$ 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 14 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities, see Note 11. 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.

(in billions)	March 31, 2017	December 31, 2016
Collateral that could be sold or repledged, delivered, or otherwise used	\$ 911.7	\$ 914.1
Collateral sold, repledged, delivered or otherwise used	761.6	746.6

Note 22 – Litigation

Contingencies

As of March 31, 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 \$2.3 billion at March 31, 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 announced that it had referred its FX investigation of the Firm and other banks to the South Africa Competition Tribunal to commence 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 seeks to represent all persons in Canada who transacted any FX instrument. The second action was filed in the province of Quebec, and seeks authorization to represent only those persons in Quebec who engaged in FX transactions. In late 2016, the Firm settled the Canadian class actions, subject to Court approval. The Court in the Ontario action granted approval of that settlement in April 2017, and Court approval of the settlement of the Quebec action remains pending.

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 JPMorgan 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 regarding the value of certain representative assets began in the Bankruptcy Court in April 2017. 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.

Investment Management Litigation. In April 2017, the Firm reached a settlement with Assured Guaranty (U.K.) and Ambac Assurance UK Limited in two cases in which it was alleged that investment portfolios managed by J.P. Morgan

Investment Management were inappropriately invested in securities backed by residential real estate collateral.

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, 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 part defendants' motion, finding that certain plaintiffs lacked standing to assert antitrust claims.

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. 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, 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.

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, one action by a monoline 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 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).

Underwriter Actions. The Firm is defending one remaining action by a monoline insurer relating to Bear Stearns' role solely as underwriter for another issuer's MBS offering. The issuer is defunct.

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 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 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 Stearns and Washington Mutual.

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. Defendants have filed a motion to dismiss the action.

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. On May 1, 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. The remaining municipal action is stayed pending an appeal by the City of Los Angeles to the United States Court of Appeals for the Ninth Circuit.

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 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 has been affirmed on appeal.

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

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. The FDIC has appealed that ruling.

JPMorgan Chase has 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 have 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. The settlement is subject to certain judicial approval procedures, and both matters are stayed pending approval of 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* on November 30, 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 \$218 million for the three months ended March 31, 2017 and was not material for the three months ended March 31, 2016. 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.

Note 23 – 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 of JPMorgan 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 months ended March 31, 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/(benefit). 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-In RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the 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-In RWA because the Firm believes it to be the best proxy for economic risk. 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.

Segment results and reconciliation^(a)

As of or for the three months ended March 31, (in millions, except ratios)	Consumer & Community Banking		Corporate & Investment Bank		Commercial Banking		Asset & Wealth Management	
	2017	2016	2017	2016	2017	2016	2017	2016
Noninterest revenue	\$ 3,317	\$ 3,806	\$ 6,936	\$ 5,534	\$ 599	\$ 556	\$ 2,268	\$ 2,245
Net interest income	7,653	7,311	2,600	2,601	1,419	1,247	819	727
Total net revenue	10,970	11,117	9,536	8,135	2,018	1,803	3,087	2,972
Provision for credit losses	1,430	1,050	(96)	459	(37)	304	18	13
Noninterest expense	6,395	6,088	5,121	4,808	825	713	2,580	2,075
Income before income tax expense	3,145	3,979	4,511	2,868	1,230	786	489	884
Income tax expense	1,157	1,489	1,270	889	431	290	104	297
Net income	\$ 1,988	\$ 2,490	\$ 3,241	\$ 1,979	\$ 799	\$ 496	\$ 385	\$ 587
Average equity	\$ 51,000	\$ 51,000	\$ 70,000	\$ 64,000	\$ 20,000	\$ 16,000	\$ 9,000	\$ 9,000
Total assets	524,770	505,071	840,304	801,053	217,348	204,602	141,049	131,276
Return on equity	15%	19%	18%	11%	15%	11%	16%	25%
Overhead ratio	58	55	54	59	41	40	84	70

As of or for the three months ended March 31, (in millions, except ratios)	Corporate		Reconciling Items ^(a)		Total	
	2017	2016	2017	2016	2017	2016
Noninterest revenue	\$ 73	\$ 269	\$ (582)	\$ (551)	\$ 12,611	\$ 11,859
Net interest income	(98)	(213)	(329)	(293)	12,064	11,380
Total net revenue	(25)	56	(911)	(844)	24,675	23,239
Provision for credit losses	–	(2)	–	–	1,315	1,824
Noninterest expense	98	153	–	–	15,019	13,837
Income/(loss) before income tax expense/(benefit)	(123)	(95)	(911)	(844)	8,341	7,578
Income tax expense/(benefit)	(158)	(63)	(911)	(844)	1,893	2,058
Net income/(loss)	\$ 35	\$ (32)	\$ –	\$ –	\$ 6,448	\$ 5,520
Average equity	\$ 77,703	\$ 81,561	\$ –	\$ –	\$ 227,703	\$ 221,561
Total assets	822,819	781,806	NA	NA	2,546,290	2,423,808
Return on equity	NM	NM	NM	NM	11%	9%
Overhead ratio	NM	NM	NM	NM	61	60

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

Note 24 – Business changes and developments

Student loan portfolio transfer

During the first quarter of 2017, the Firm transferred the student loan portfolio to held-for-sale, resulting in a writedown 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. The transfer impacted certain loan and credit-related metrics, including net charge-offs, net charge-off rates and the allowance for loan losses.

Subsequent to March 31, 2017, the Firm entered into an agreement to sell the student loan portfolio. The carrying value of the student loan portfolio was \$6.3 billion as of March 31, 2017. The sale is scheduled to close over the next several months and is not expected to have a material impact on the Firm's Consolidated Financial Statements.



Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

We have reviewed the accompanying consolidated balance sheet of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of March 31, 2017, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the three-month periods ended March 31, 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

May 2, 2017

JPMorgan Chase & Co.
Consolidated average balance sheets, interest and rates
(Taxable-equivalent interest and rates; in millions, except rates)

	Three months ended March 31, 2017			Three months ended March 31, 2016		
	Average balance	Interest ^(e)	Rate (annualized)	Average balance	Interest ^(e)	Rate (annualized)
Assets						
Deposits with banks	\$ 422,169	\$ 722	0.69 %	\$ 364,200	\$ 460	0.51%
Federal funds sold and securities purchased under resale agreements	196,965	526	1.08	204,992	554	1.09
Securities borrowed	95,372	(44) ^(f)	(0.19)	103,461	(92) ^(f)	(0.36)
Trading assets - debt instruments	225,801	1,883	3.38	208,315	1,716	3.31
Taxable securities	240,803	1,430	2.41	240,375	1,442	2.41
Nontaxable securities ^(a)	44,762	690	6.25	44,113	665	6.06
Total securities	285,565	2,120	3.01 ^(g)	284,488	2,107	2.98 ^(g)
Loans	891,904	9,822	4.47	840,526	8,907	4.26
Other assets ^(b)	43,136	342	3.21	38,001	193	2.04
Total interest-earning assets	2,160,912	15,371	2.88	2,043,983	13,845	2.72
Allowance for loan losses	(13,723)			(13,637)		
Cash and due from banks	19,858			17,944		
Trading assets - equity instruments	115,284			85,280		
Trading assets - derivative receivables	61,400			70,651		
Goodwill	47,293			47,332		
Mortgage servicing rights	6,103			5,918		
Other intangible assets	853			985		
Other assets	135,182			136,465		
Total assets	\$ 2,533,162			\$ 2,394,921		
Liabilities						
Interest-bearing deposits	\$ 986,015	\$ 483	0.20 %	\$ 888,340	\$ 320	0.14%
Federal funds purchased and securities loaned or sold under repurchase agreements	189,611	293	0.63	171,246	260	0.61
Commercial paper	13,364	40	1.22	17,537	33	0.75
Trading liabilities - debt, short-term and other liabilities ^{(c)(d)}	199,981	438	0.89	196,233	227	0.47
Beneficial interests issued by consolidated VIEs	38,775	135	1.41	39,839	113	1.14
Long-term debt	292,224	1,589	2.21	288,160	1,219	1.70
Total interest-bearing liabilities	1,719,970	2,978	0.70	1,601,355	2,172	0.55
Noninterest-bearing deposits	405,548			394,928		
Trading liabilities - equity instruments ^(d)	21,072			18,504		
Trading liabilities - derivative payables	48,373			60,591		
All other liabilities, including the allowance for lending-related commitments	84,428			71,914		
Total liabilities	2,279,391			2,147,292		
Stockholders' equity						
Preferred stock	26,068			26,068		
Common stockholders' equity	227,703			221,561		
Total stockholders' equity	253,771			247,629		
Total liabilities and stockholders' equity	\$ 2,533,162			\$ 2,394,921		
Interest rate spread			2.18 %			2.17%
Net interest income and net yield on interest-earning assets		\$ 12,393	2.33		\$ 11,673	2.30

(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 \$94,086 million and \$87,718 million for the three months ended March 31, 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 a result of increased 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 March 31, 2017 and 2016, the annualized rates for securities, based on amortized cost, were 3.04% and 3.03%, respectively; this does not give effect to changes in fair value that are reflected in AOCI.

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

CE1 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.

COO: Chief Operating Officer

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+/Caa1 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 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

Loan-equivalent: represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn prior to an event of a default by an obligor.

LCR: Liquidity coverage ratio

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 15c3-1 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 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

OC: 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).

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 III 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.

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.

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 62-66 of this Form 10-Q and pages 116-123 of JPMorgan 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 March 31, 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 1. Legal Proceedings.

For information that updates the disclosures set forth under Part I, 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 22 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 of JPMorgan Chase's 2016 Annual Report on Form 10-K and Forward-Looking Statements on page 72 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 March 31, 2017, 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, as follows: (i) on January 9, 2017, 8,362 shares were issued to retired directors who had deferred receipt of such common stock pursuant to the Deferred Compensation Plan for Non-Employee Directors; and (ii) on January 30, 2017, 15,308 shares were issued to retired employees who had deferred receipt of such common shares pursuant to the Corporate Performance Incentive Plan.

Repurchases under the common equity repurchase program

Following receipt of the Federal Reserve's non-objection to the Firm's 2016 capital plan submitted under CCAR, 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 plans.

The following table sets forth the Firm's repurchases of common equity for the three months ended March 31, 2017 and 2016. There were no warrants repurchased during the three months ended March 31, 2017 and 2016.

(in millions)	Three months ended March 31,	
	2017	2016
Total shares of common stock repurchased	32.1	29.2
Aggregate common stock repurchases	\$ 2,832	\$ 1,696

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 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 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 10b5-1 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 10b5-1 programs; and may be suspended at any time.

Shares repurchased pursuant to the common equity repurchase program during the three months ended March 31, 2017, were as follows.

Three months ended March 31, 2017	Total shares of common stock repurchased	Average price paid per share of common stock ^(a)	Aggregate repurchases of common equity (in millions) ^(a)	Dollar value of remaining authorized repurchase (in millions) ^(a)
January	10,003,603	\$ 85.35	\$ 854	\$ 5,200
February	8,803,302	87.91	774	4,426
March	13,326,059	90.40	1,204	3,221 ^(b)
First quarter	32,132,964	\$ 88.14	\$ 2,832	\$ 3,221^(b)

(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.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

Iran threat reduction disclosure

Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, which added Section 13(r) to the Securities Exchange Act of 1934, an issuer is required to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with individuals or entities designated pursuant to certain Executive Orders. Disclosure may be required even where the activities, transactions or dealings were conducted in compliance with applicable law. Except as set forth below, as of the date of this report, the Firm is not aware of any other activity, transaction or dealing by any of its affiliates during the quarter ended March 31, 2017 that requires disclosure under Section 219.

During the first quarter of 2017, a foreign-incorporated subsidiary of JPMorgan Chase & Co. processed a payment in the amount of EUR 1,466 for its client, a non-U.S. international organization, where the payment originated from entities owned or controlled by the Government of Iran. The payment, which was received into the client’s account, was for the purchase of informational materials and was therefore an exempt transaction pursuant to 31 C.F.R. 560.210(c). JPMorgan Chase & Co. charged a fee of EUR 2.50 for this transaction. JPMorgan Chase & Co. may in the future engage in similar transactions for its clients to the extent permitted by U.S. law.

Subsidiary merger ratification

In furtherance of the Firm’s legal entity rationalization program as part of the actions being undertaken by the Firm to address the FDIC’s and Federal Reserve’s feedback on the Firm’s 2015 Resolution submission, on December 19, 2016, the Firm merged a wholly-owned subsidiary, Gregory/Madison Avenue LLC, into JPMorgan Chase & Co. (“JPMC”). The merger was not formally authorized by the Board of Directors of JPMC prior to the merger. On April 18, 2017, the Board of Directors of JPMC approved the ratification of the merger pursuant to Section 204 of the Delaware General Corporation Law (the “DGCL”), and on May 2, 2017, a certificate of validation was filed with the Secretary of State of Delaware in respect of the ratification, whereupon the ratification became effective. Any claim that the merger is void or voidable due to the failure of authorization, or that the Delaware Court of Chancery should declare in its discretion that the ratification thereof in accordance with Section 204 of the General Corporation Law not be effective or be effective only on certain conditions, must be brought within the later of (i) 120 days from the validation effective time (which is May 2, 2017) and (ii) the giving of this notice (which is deemed given on the date that this Form 10-Q is filed with the Securities and Exchange Commission).

Item 6. Exhibits.

Exhibit No.	Description of Exhibit
3.1	Certificate of Merger of Gregory/Madison Avenue LLC into JPMorgan Chase & Co., dated December 14, 2016. ^(a)
3.2	Certificate of Validation of JPMorgan Chase & Co. pursuant to Section 204 of the General Corporation Law of the State of Delaware, dated May 2, 2017. ^(a)
15	Letter re: Unaudited Interim Financial Information. ^(a)
31.1	Certification. ^(a)
31.2	Certification. ^(a)
32	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. ^(b)
101.INS	XBRL Instance Document. ^{(a)(c)}
101.SCH	XBRL Taxonomy Extension Schema Document. ^(a)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document. ^(a)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document. ^(a)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document. ^(a)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document. ^(a)

(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 March 31, 2017, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income (unaudited) for the three months ended March 31, 2017 and 2016, (ii) the Consolidated statements of comprehensive income (unaudited) for the three months ended March 31, 2017 and 2016, (iii) the Consolidated balance sheets (unaudited) as of March 31, 2017, and December 31, 2016, (iv) the Consolidated statements of changes in stockholders’ equity (unaudited) for the three months ended March 31, 2017 and 2016, (v) the Consolidated statements of cash flows (unaudited) for the three months ended March 31, 2017 and 2016, and (vi) the Notes to Consolidated Financial Statements (unaudited).

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 Chase & Co.

(Registrant)

By:

/s/ Nicole Giles

Nicole Giles

Managing Director and Corporate Controller

(Principal Accounting Officer)

Date: May 2, 2017

INDEX TO EXHIBITS

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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.
†	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.

Exhibit 3.1

**STATE OF DELAWARE
CERTIFICATE OF MERGER OF
DOMESTIC LIMITED LIABILITY COMPANY
INTO A
DOMESTIC CORPORATION**

Pursuant to Title 8, Section 264(c) of the Delaware General Corporation Law and Title 6, Section 18-209 of the Delaware Limited Liability Company Act, the undersigned corporation executed the following Certificate of Merger:

FIRST: The name of the surviving corporation is JPMorgan Chase & Co., a Delaware Corporation, and the name of the limited liability company being merged into this surviving corporation is Gregory/Madison Avenue LLC.

SECOND: The Agreement of Merger has been approved, adopted, certified, executed and acknowledged by the surviving corporation and the merging limited liability company.

THIRD: The name of the surviving corporation is JPMorgan Chase & Co.

FOURTH: The merger is to become effective on December 19, 2016.

FIFTH: The Agreement of Merger is on file at 4 Chase Metrotech Center, Floor 22 Brooklyn, NY 11245-001, the place of business of the surviving corporation.

SIXTH: A copy of the Agreement of Merger will be furnished by the corporation on request, without cost, to any stockholder of any constituent corporation or member of any constituent limited liability company.

SEVENTH: The Certificate of Incorporation of the surviving corporation shall be [its] Certificate of Incorporation.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by an authorized officer, the 14th day of December, A.D., 2016.

By: /s/ Aisling DeSola
Authorized Officer

Name: Aisling DeSola
Print or Type

Title: Assistant Secretary

Exhibit 3.2

CERTIFICATE OF VALIDATION OF JPMORGAN CHASE & CO.

Pursuant to Section 204 of the
General Corporation Law of the State of Delaware

JPMorgan Chase & Co., a corporation organized and existing under the laws of the State of Delaware (the “Corporation”), certifies as follows:

1. The defective corporate act that is the subject of this Certificate of Validation is the merger of Gregory/Madison Avenue LLC with and into the Corporation (the “Merger”) on December 19, 2016.
2. The nature of the failure of authorization in respect of the Merger was the failure of the Merger to have been duly authorized in accordance with Section 264 and Section 251(f) of the General Corporation Law of the State of Delaware (the “DGCL”) due to the failure of the Merger to have been adopted and approved by the Board of Directors of the Corporation.
3. The defective corporate act that is the subject of this Certificate of Validation was duly ratified in accordance with Section 204 of the DGCL pursuant to resolutions of the Board of Directors of the Corporation adopted on April 18, 2017.
4. The Certificate of Merger of Domestic Limited Liability Company into a Domestic Corporation (the “Certificate of Merger”) was previously filed under Section 103 of the DGCL in respect of the Merger on December 14, 2016. A copy of the Certificate of Merger is attached hereto as **EXHIBIT A**.

[Signature Page Follows]

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Validation to be executed by its duly authorized officer as of this 2nd day of May, 2017.

JPMORGAN CHASE & CO.

By: /s/ Holly K. Youngwood
Name: Holly K. Youngwood
Title: Managing Director
Assistant Corporate Secretary

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:13 PM 12/14/2016
FILED 04:13 PM 12/14/2016
SR 20167081837 - File Number 691011

**STATE OF DELAWARE
CERTIFICATE OF MERGER OF
DOMESTIC LIMITED LIABILITY COMPANY
INTO A
DOMESTIC CORPORATION**

Pursuant to Title 8, Section 264(c) of the Delaware General Corporation Law and Title 6, Section 18-209 of the Delaware Limited Liability Company Act, the undersigned corporation executed the following Certificate of Merger:

FIRST: The name of the surviving corporation is JPMorgan Chase & Co., a Delaware Corporation, and the name of the limited liability company being merged into this surviving corporation is Gregory/Madison Avenue LLC.

SECOND: The Agreement of Merger has been approved, adopted, certified, executed and acknowledged by the surviving corporation and the merging limited liability company.

THIRD: The name of the surviving corporation is JPMorgan Chase & Co.

FOURTH: The merger is to become effective on December 19, 2016.

FIFTH: The Agreement of Merger is on file at 4 Chase Metrotech Center, Floor 22 Brooklyn, NY 11245-001, the place of business of the surviving corporation.

SIXTH: A copy of the Agreement of Merger will be furnished by the corporation on request, without cost, to any stockholder of any constituent corporation or member of any constituent limited liability company.

SEVENTH: The Certificate of Incorporation of the surviving corporation shall be [its] Certificate of Incorporation.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by an authorized officer, the 14th day of December, A.D., 2016.

By: /s/ Aisling DeSola
Authorized Officer

Name: Aisling DeSola
Print or Type

Title: Assistant Secretary



May 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 May 2, 2017 on our review of the consolidated balance sheet of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of March 31, 2017 and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the three-month periods ended March 31, 2017 and 2016, included in the Firm's quarterly report on Form 10-Q for the quarter ended March 31, 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.

Very truly yours,

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP, 300 Madison Avenue, New York, NY 10017

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: May 2, 2017

/s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

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: May 2, 2017

/s/ Marianne Lake

Marianne Lake
Executive Vice President and Chief Financial Officer

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 JPMorgan Chase & Co. on Form 10-Q for the period ended March 31, 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 of JPMorgan Chase & Co.

Date: May 2, 2017

By: /s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Date: May 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.