

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
September 30, 2016

Commission file
number 1-5805

JPMorgan Chase & Co.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer (Do not check if a smaller reporting company) ☐

Smaller reporting company ☐

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

☐ Yes ☒ No

Number of shares of common stock outstanding as of September 30, 2016: 3,578,264,278

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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)

Nine months ended
September 30,

| | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | 2016 | 2015 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| Selected income statement data | | | | | | | |
| Total net revenue | \$ 24,673 | \$ 24,380 | \$ 23,239 | \$ 22,885 | \$ 22,780 | \$ 72,292 | \$ 70,658 |
| Total noninterest expense | 14,463 | 13,638 | 13,837 | 14,263 | 15,368 | 41,938 | 44,751 |
| Pre-provision profit | 10,210 | 10,742 | 9,402 | 8,622 | 7,412 | 30,354 | 25,907 |
| Provision for credit losses | 1,271 | 1,402 | 1,824 | 1,251 | 682 | 4,497 | 2,576 |
| Income before income tax expense | 8,939 | 9,340 | 7,578 | 7,371 | 6,730 | 25,857 | 23,331 |
| Income tax expense/(benefit) | 2,653 | 3,140 | 2,058 | 1,937 | (74) | 7,851 | 4,323 |
| Net income | \$ 6,286 | \$ 6,200 | \$ 5,520 | \$ 5,434 | \$ 6,804 | \$ 18,006 | \$ 19,008 |
| Earnings per share data | | | | | | | |
| Net income: Basic | \$ 1.60 | \$ 1.56 | \$ 1.36 | \$ 1.34 | \$ 1.70 | \$ 4.51 | \$ 4.72 |
| Diluted | 1.58 | 1.55 | 1.35 | 1.32 | 1.68 | 4.48 | 4.68 |
| Average shares: Basic | 3,597.4 | 3,635.8 | 3,669.9 | 3,674.2 | 3,694.4 | 3,634.4 | 3,709.2 |
| Diluted | 3,629.6 | 3,666.5 | 3,696.9 | 3,704.6 | 3,725.6 | 3,664.3 | 3,742.2 |
| Market and per common share data | | | | | | | |
| Market capitalization | 238,277 | 224,449 | 216,547 | 241,899 | 224,438 | 238,277 | 224,438 |
| Common shares at period-end | 3,578.3 | 3,612.0 | 3,656.7 | 3,663.5 | 3,681.1 | 3,578.3 | 3,681.1 |
| Share price ^(a) : | | | | | | | |
| High | \$ 67.90 | \$ 66.20 | \$ 64.13 | \$ 69.03 | \$ 70.61 | \$ 67.90 | \$ 70.61 |
| Low | 58.76 | 57.05 | 52.50 | 58.53 | 50.07 | 52.50 | 50.07 |
| Close | 66.59 | 62.14 | 59.22 | 66.03 | 60.97 | 66.59 | 60.97 |
| Book value per share | 63.79 | 62.67 | 61.28 | 60.46 | 59.67 | 63.79 | 59.67 |
| Tangible book value per share ("TBVPS") ^(b) | 51.23 | 50.21 | 48.96 | 48.13 | 47.36 | 51.23 | 47.36 |
| Cash dividends declared per share | 0.48 | 0.48 | 0.44 | 0.44 | 0.44 | 1.40 | 1.28 |
| Selected ratios and metrics | | | | | | | |
| Return on common equity ("ROE") | 10% | 10% | 9% | 9% | 12% | 10% | 11% |
| Return on tangible common equity ("ROTCE") ^(b) | 13 | 13 | 12 | 11 | 15 | 13 | 14 |
| Return on assets ("ROA") | 1.01 | 1.02 | 0.93 | 0.90 | 1.11 | 0.99 | 1.02 |
| Overhead ratio | 59 | 56 | 60 | 62 | 67 | 58 | 63 |
| Loans-to-deposits ratio | 65 | 66 | 64 | 65 | 64 | 65 | 64 |
| High quality liquid assets ("HQLA") (in billions) ^(c) | \$ 539 | \$ 516 | \$ 505 | \$ 496 | \$ 505 | \$ 539 | \$ 505 |
| Common equity Tier 1 ("CET1") capital ratio ^(d) | 12.0% | 12.0% | 11.9% | 11.8% | 11.5% | 12.0% | 11.5% |
| Tier 1 capital ratio ^(d) | 13.6 | 13.6 | 13.5 | 13.5 | 13.3 | 13.6 | 13.3 |
| Total capital ratio ^(d) | 15.1 | 15.2 | 15.1 | 15.1 | 14.9 | 15.1 | 14.9 |
| Tier 1 leverage ratio ^(d) | 8.5 | 8.5 | 8.6 | 8.5 | 8.4 | 8.5 | 8.4 |
| Selected balance sheet data (period-end) | | | | | | | |
| Trading assets | \$ 374,837 | \$ 380,793 | \$ 366,153 | \$ 343,839 | \$ 361,708 | \$ 374,837 | \$ 361,708 |
| Securities | 272,401 | 278,610 | 285,323 | 290,827 | 306,660 | 272,401 | 306,660 |
| Loans | 888,054 | 872,804 | 847,313 | 837,299 | 809,457 | 888,054 | 809,457 |
| Core loans | 795,077 | 775,813 | 746,196 | 732,093 | 698,988 | 795,077 | 698,988 |
| Average core loans | 779,383 | 760,721 | 737,297 | 715,282 | 680,224 | 759,207 | 655,753 |
| Total assets | 2,521,029 | 2,466,096 | 2,423,808 | 2,351,698 | 2,416,635 | 2,521,029 | 2,416,635 |
| Deposits | 1,376,138 | 1,330,958 | 1,321,816 | 1,279,715 | 1,273,106 | 1,376,138 | 1,273,106 |
| Long-term debt ^(e) | 309,418 | 295,627 | 290,754 | 288,651 | 292,503 | 309,418 | 292,503 |
| Common stockholders' equity | 228,263 | 226,355 | 224,089 | 221,505 | 219,660 | 228,263 | 219,660 |
| Total stockholders' equity | 254,331 | 252,423 | 250,157 | 247,573 | 245,728 | 254,331 | 245,728 |
| Headcount | 242,315 | 240,046 | 237,420 | 234,598 | 235,678 | 242,315 | 235,678 |
| Credit quality metrics | | | | | | | |
| Allowance for credit losses | \$ 15,304 | \$ 15,187 | \$ 15,008 | \$ 14,341 | \$ 14,201 | \$ 15,304 | \$ 14,201 |
| Allowance for loan losses to total retained loans | 1.61% | 1.64% | 1.66% | 1.63% | 1.67% | 1.61% | 1.67% |
| Allowance for loan losses to retained loans excluding purchased credit-impaired loans ^(f) | 1.37 | 1.40 | 1.40 | 1.37 | 1.40 | 1.37 | 1.40 |
| Nonperforming assets | \$ 7,779 | \$ 7,757 | \$ 8,023 | \$ 7,034 | \$ 7,294 | \$ 7,779 | \$ 7,294 |
| Net charge-offs | 1,121 | 1,181 | 1,110 | 1,064 | 963 | 3,412 | 3,022 |
| Net charge-off rate | 0.51% | 0.56% | 0.53% | 0.52% | 0.49% | 0.53% | 0.53% |

Note: Effective January 1, 2016, the Firm adopted new accounting guidance related to (1) the recognition and measurement of debit valuation adjustments ("DVA") on financial liabilities where the fair value option has been elected, and (2) the accounting for employee stock-based incentive payments. For additional information, see Accounting and Reporting Developments on pages 82-83 and Notes 3, 4, and 19.

(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange.

(b) TBVPS and ROTCE are considered key financial performance 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 16-17.

(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR"). For additional information, see HQLA on page 74.

(d) Ratios presented are calculated under the Basel III Transitional capital rules and represent the Collins Floor. See Capital Management on pages 67-73 for additional information on Basel III.

(e) Included unsecured long-term debt of \$226.8 billion, \$220.6 billion, \$216.1 billion, \$211.8 billion and \$214.6 billion at September 30, 2016, June 30, 2016, March 31, 2016, December 31, 2015 and September 30, 2015, respectively.

(f) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 16-17. For further discussion, see Allowance for credit losses on pages 57-59.

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 third quarter of 2016.

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, 2015, filed with the U.S. Securities and Exchange Commission ("2015 Annual Report" or 2015 "Form 10-K"), to which reference is hereby made. See the Glossary of terms and acronyms on pages 172-176 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 84 of this Form 10-Q and Part I, Item 1A, Risk Factors, on pages 8-18 of JPMorgan Chase's 2015 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 \$254.3 billion in stockholders' equity as of September 30, 2016. The Firm is a leader in investment

banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the 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 Management ("AM"). 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 2015 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,

Three months ended September 30,

Nine months ended September 30,

(in millions, except per share data and ratios)

| | 2016 | 2015 | Change | 2016 | 2015 | Change |
|---------------------------------------|----------------|----------------|-------------|----------------|----------------|-------------|
| Selected income statement data | | | | | | |
| Total net revenue | \$ 24,673 | \$ 22,780 | 8% | \$ 72,292 | \$ 70,658 | 2% |
| Total noninterest expense | 14,463 | 15,368 | (6) | 41,938 | 44,751 | (6) |
| Pre-provision profit | 10,210 | 7,412 | 38 | 30,354 | 25,907 | 17 |
| Provision for credit losses | 1,271 | 682 | 86 | 4,497 | 2,576 | 75 |
| Net income | 6,286 | 6,804 | (8) | 18,006 | 19,008 | (5) |
| Diluted earnings per share | \$ 1.58 | \$ 1.68 | (6)% | \$ 4.48 | \$ 4.68 | (4)% |
| Selected ratios and metrics | | | | | | |
| Return on common equity | 10% | 12% | | 10% | 11% | |
| Return on tangible common equity | 13 | 15 | | 13 | 14 | |
| Tangible book value per share | \$ 51.23 | \$ 47.36 | 8% | \$ 51.23 | \$ 47.36 | 8% |
| Capital ratios^(a) | | | | | | |
| CET1 | 12.0% | 11.5% | | 12.0% | 11.5% | |
| Tier 1 capital | 13.6 | 13.3 | | 13.6 | 13.3 | |

(a) Ratios presented are calculated under the transitional Basel III rules and represent the Collins Floor. See Capital Management on pages 67-73 for additional information on Basel III.

Business Overview

JPMorgan Chase reported strong results in the third-quarter of 2016 with net income of \$6.3 billion, or \$1.58 per share, on net revenue of \$24.7 billion. The Firm reported ROE of 10% and ROTCE of 13%.

Net income declined 8% compared with the prior-year reflecting higher income tax expense in the current quarter. The prior-year quarter included tax benefits of \$2.2 billion due to the resolution of tax audits and the release of deferred taxes.

Total net revenue increased 8% compared with the prior-year. Net interest income was \$11.6 billion, up 6%, primarily driven by loan growth and the net impact of higher interest rates, partially offset by lower investment securities balances. Noninterest revenue was \$13.1 billion, up 10%, primarily driven by higher Markets and Investment Banking revenue in CIB.

Noninterest expense was \$14.5 billion, down 6% compared with the prior-year, driven by lower legal expense, partially offset by higher compensation expense.

The provision for credit losses was \$1.3 billion, an increase from \$682 million, reflecting an increase in the allowance for credit losses in the current quarter compared with a decrease in the prior-year. The consumer provision reflected an increase in the allowance for credit losses of approximately \$225 million, reflecting loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio. The wholesale provision was a benefit, primarily driven by a net allowance reduction of approximately \$50 million in the Oil & Gas portfolio.

The total allowance for credit losses was \$15.3 billion at September 30, 2016, and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1.37%, compared with 1.40% in the prior-year. The Firm's nonperforming assets totaled \$7.8 billion, an increase from the prior-year level of \$7.3 billion.

Firmwide average core loans increased 15% compared with the prior-year quarter and increased 2% compared with the second quarter of 2016.

Within CCB, average core loans increased 19% from the prior-year. CCB had record growth in average deposits, an increase of \$58 billion, or 11%, from the prior-year. Credit card sales volume increased 10%, and merchant processing volume increased 13%, from the prior-year. CCB had 26 million active mobile customers in the third quarter of 2016, an increase of 17% from the prior-year.

CIB maintained its #1 ranking for Global Investment Banking fees with a 8.1% wallet share for the nine months ended September 30, 2016. Within CB, average loans increased 14% from the prior-year as loans in the commercial and industrial client segment increased 10% and loans in the commercial real estate client segment increased 19%. AM had record average loans, an increase of 5% over the prior-year, and 80% of AM'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 18-40.

The Firm added to its capital, ending the third quarter of 2016 with a TBVPS of \$51.23, up 8% over the prior-year. The Firm's estimated Basel III Advanced Fully Phased-In CET1

capital and ratio were \$181 billion and 11.9%, respectively. The Fully Phased-In supplementary leverage ratio (“SLR”) for the Firm and for JPMorgan Chase Bank, N.A. were each 6.6% at September 30, 2016. The Firm also was compliant with the Fully Phased-In U.S. LCR and had \$539 billion of HQLA as of September 30, 2016. For further discussion of the liquidity coverage ratio (“LCR”) and HQLA, see Liquidity Risk Management on pages 74–78.

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 these measures, see Explanation and Reconciliation of the Firm’s Use of Non-GAAP Financial Measures and Key Performance Measures on pages 16–17, and Capital Management on pages 67–73.

JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided credit and raised capital of \$1.7 trillion for commercial and consumer clients during the first nine months of 2016:

- \$195 billion of credit for consumers
- \$18 billion of credit for U.S. small businesses
- \$555 billion of credit for corporations
- \$895 billion of capital raised for corporate clients and non-U.S. government entities
- \$74 billion of credit and capital raised for nonprofit and U.S. government entities, including states, municipalities, hospitals and universities

Regulatory and business developments

On October 1, 2016, the Firm filed with the Federal Reserve and the Federal Deposit Insurance Corporation (“FDIC”) its submission (the “2016 Resolution Submission”), describing how the Firm remediated the deficiencies and providing a status report of its actions to address the shortcomings identified by the agencies in the Firm’s 2015 Resolution Plan and communicated to the Firm in April 2016. On October 4, 2016, the two agencies made public a subsection of that submission which is available on the FDIC’s and Federal Reserve’s websites, as well on the Firm’s website. As previously disclosed, in April 2016, the Federal Reserve and the FDIC jointly provided firm-specific feedback on the 2015 Resolution Plans of eight systemically important domestic banking institutions, and determined that five of these 2015 Resolution Plans, including that of the Firm, were not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code, as provided under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”). In addition to the deficiencies in the Firm’s 2015 Resolution Plan identified by the agencies, the FDIC and Federal Reserve also identified certain shortcomings which were required to be satisfactorily addressed in the Firm’s Resolution Plan due on July 1, 2017.

The Firm has taken several steps to address the FDIC’s and Federal Reserve’s feedback, including, among other actions, increasing its liquidity reserves and pre-positioning significant amounts of capital and liquidity at the Firm’s “material legal entities” (as defined in its 2016 Resolution Submission); the establishment of a new subsidiary that will become an “intermediate holding company” and will have

contributed to it the stock of substantially all of JPMorgan Chase & Co.’s direct subsidiaries (other than JPMorgan Chase Bank, N.A.), as well as other assets and intercompany indebtedness owing to JPMorgan Chase & Co., made refinements to the Firm’s liquidity and capital governance frameworks; and created a Firm-wide “trigger framework” that identifies key actions and escalations that would need to be taken, as well as decisions that would need to be made, at critical points in time if certain defined liquidity and/or capital metrics fall below defined thresholds. The FDIC and the Federal Reserve are reviewing the 2016 Resolution Submission to assess whether the Firm has adequately addressed and remediated the identified deficiencies. If the FDIC and the Federal Reserve jointly conclude that the Firm has not adequately remediated the identified deficiencies, the two agencies may jointly impose more stringent capital or liquidity requirements on the Firm as well as restrictions on the growth, activities or operations of the Firm or its subsidiaries.

Various regulatory and governmental agencies have made inquiries to the Firm about its sales practices with retail customers, including, among other matters, the Firm’s incentive-compensation structures related to such sales practices. The Firm is responding to these inquiries.

On October 3, 2016, the Firm implemented Securities and Exchange Commission (“SEC”) rules governing money-market funds requiring a floating net asset value be calculated for institutional prime money-market funds. As a result of these new rules, the Firm experienced increased client activity in the third quarter and transfers from certain money-market funds into government funds and deposit products.

On October 13, 2016 the IRS issued final and temporary regulations under Section 385 of the U.S. Internal Revenue Code dealing with the recharacterization of certain related-party debt as equity for U.S. income tax purposes. These regulations significantly narrowed the scope of the proposed regulations, which were issued in April 2016. As revised, the regulations should not have a meaningful impact to the Firm.

Beginning September 1, 2016, rules promulgated by U.S. prudential regulators and the Commodity Futures Trading Commission (“CFTC”) requiring both the collecting and posting of variation margin and initial margin in respect of non-centrally cleared derivatives, inclusive of inter-affiliate transactions, became effective. The Firm has implemented the requirements of the rules that have become effective.

On June 23, 2016, the U.K. conducted a referendum and voted to leave the European Union. Many international banks, including the Firm, operate substantial parts of their European Union businesses from entities based in the U.K. Upon the U.K. leaving the European Union, the regulatory and legal environment that would then exist, and to which the Firm’s U.K. operations would then be subject, will depend on, in certain respects, the nature of the arrangements agreed to with the European Union and other trading partners.

These arrangements cannot be predicted, but currently the Firm does not believe any of the likely identified scenarios would threaten the viability of the Firm’s business units or

the Firm's ability to serve clients across the European Union and in the U.K. However, it is possible that under some scenarios, changes to the Firm's legal entity structure and operations would be required, which might result in a less efficient operating model across the Firm's European legal entities.

On June 29, 2016, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2016 capital plan, submitted under the Comprehensive Capital Analysis and Review ("CCAR"). For additional information see Capital Management on pages 67-73.

On April 6, 2016, the U.S. Department of Labor ("DOL") issued its final "fiduciary" rule. The rule will deem many of the investment, rollover and asset management recommendations from broker-dealers, banks and other financial institutions to clients regarding their individual retirement accounts and other retirement accounts fiduciary "investment advice" under the Employee Retirement Income Security Act of 1974 ("ERISA"), as amended. Among the most significant impacts of the rule and related prohibited transaction exemptions will be the impact on the fee and compensation practices at financial institutions and on certain fee and revenue sharing arrangements among funds, fund sponsors and the financial institutions that offer investment advice to retail retirement clients. The related exemptions may require new client contracts, adherence to "impartial conduct" standards (including a requirement to act in the "best interest" of retirement clients) the adoption of related policies and procedures, as well as website and other disclosures to both investors and the DOL. The Firm believes it will be able to conform its business practices to meet the requirements of the new rule and exemptions within the prescribed time periods.

In March 2016, the Basel Committee proposed revisions to the operational and credit risk capital frameworks of Basel III and in April 2016, proposed a recalibration of the leverage ratio, changes to the definition of defaulted assets and finalized the treatment of interest rate risk in the banking book. As these proposals are finalized by the Basel Committee, U.S. banking regulators will propose requirements applicable to U.S. financial institutions. In March 2016, the Federal Reserve Board released a revised proposal to establish single-counterparty credit limits for large U.S. bank holding companies and foreign banking organizations. The Firm continues to assess the impacts as the proposed rules are finalized and will make appropriate adjustments to its businesses in response to these and other ongoing developments in regulatory requirements.

Business 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 84 of this Form 10-Q and Risk Factors on

pages 8-18 of JPMorgan Chase's 2015 Annual Report. There is no assurance that actual results for the full year of 2016 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 2016 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 expects fourth quarter 2016 managed net interest income to be modestly higher than in the third quarter of 2016, reflecting continued strong loan growth. Management expects average core loans to be up approximately 15% for the full year 2016 compared to the prior-year, at the higher end of the previously disclosed range.

Management also expects fourth quarter 2016 managed noninterest revenue to decline compared to the third quarter of 2016, reflecting anticipated lower markets revenue, seasonally lower Mortgage Banking Revenue and higher Card new account origination costs.

The Firm continues to experience charge-offs at levels lower than its through-the-cycle expectations reflecting favorable credit trends across the consumer and wholesale portfolios (excluding the Oil & Gas and Metals & Mining portfolios). Management expects total net charge-offs of up to approximately \$4.75 billion for full year 2016, with the increase from 2015 levels driven by loan growth as well as higher charge-offs in the Oil & Gas portfolio.

The Firm continues to take a disciplined approach to managing its expenses, while investing in growth and innovation. The Firm intends to leverage its scale and improve its operating efficiencies in order to reinvest its expense savings in additional technology and marketing investments and fund other growth initiatives. As a result, the Firm expects adjusted expense for full year 2016 to be approximately \$56 billion (excluding Firmwide legal expense).

In Card, Commerce Solutions & Auto, management expects revenue to decline approximately \$200 million in the fourth quarter of 2016 compared to the third quarter of 2016, driven by higher Card new account origination costs on strong, but tapering demand for Sapphire Reserve through the fourth quarter of 2016; actual results will be dependent on the number of new accounts originated.

In CIB, for the fourth quarter of 2016, management expects Securities Services revenue to be approximately \$875 million, depending on market conditions.

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 and nine months ended September 30, 2016 and 2015, 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 80-81 of this Form 10-Q and pages 165-169 of JPMorgan Chase's 2015 Annual Report.

Revenue

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|------------------|-----------|---------------------------------|------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Investment banking fees | \$ 1,866 | \$ 1,604 | 16% | \$ 4,843 | \$ 5,231 | (7)% |
| Principal transactions ^(a) | 3,451 | 2,367 | 46 | 9,106 | 8,856 | 3 |
| Lending- and deposit-related fees | 1,484 | 1,463 | 1 | 4,290 | 4,244 | 1 |
| Asset management, administration and commissions | 3,597 | 3,845 | (6) | 10,902 | 11,667 | (7) |
| Securities gains | 64 | 33 | 94 | 136 | 129 | 5 |
| Mortgage fees and related income | 624 | 469 | 33 | 1,980 | 1,957 | 1 |
| Card income | 1,202 | 1,447 | (17) | 3,861 | 4,493 | (14) |
| Other income ^(b) | 782 | 628 | 25 | 2,844 | 1,796 | 58 |
| Noninterest revenue | 13,070 | 11,856 | 10 | 37,962 | 38,373 | (1) |
| Net interest income | 11,603 | 10,924 | 6 | 34,330 | 32,285 | 6 |
| Total net revenue | \$ 24,673 | \$ 22,780 | 8% | \$ 72,292 | \$ 70,658 | 2% |

(a) Effective January 1, 2016, changes in DVA on fair value option elected liabilities previously recorded in principal transactions revenue are recorded in other comprehensive income ("OCI"). For additional information, see the segments results of CIB and Accounting and Reporting Developments on pages 25-30 and pages 82-83, respectively.

(b) Included operating lease income of \$708 million and \$536 million for the three months ended September 30, 2016 and 2015, respectively, and \$2.0 billion and \$1.5 billion for the nine months ended September 30, 2016 and 2015, respectively.

Quarterly results

Total net revenue increased by 8% primarily reflecting higher noninterest revenue driven by strong performance in CIB, and higher net interest income in the Firm's reportable business segments.

Investment banking fees increased reflecting strong performance across products. Equity underwriting fees increased primarily driven by growth in industry-wide issuance, with a stable market backdrop and strong investor demand; debt underwriting fees increased reflecting strong industry-wide bond issuance; and advisory fees increased driven by a greater share of fees for completed transactions. For additional information on investment banking fees, see CIB segment results on pages 25-30, CB segment results on pages 31-34 and Note 6.

Principal transactions revenue increased reflecting broad-based strength across products in CIB's Fixed Income Markets business. Rates performance was particularly strong, as markets remained active throughout the quarter, post the Brexit vote and in anticipation of central bank actions and the new rules governing money market funds. Credit and Securitized Products revenue was also higher, driven by improving market sentiment across primary and secondary markets which produced robust issuance volumes and strong client trading activity. The increase in the Fixed Income Markets business was partially offset by the net results in Credit Adjustments & Other, which had a loss of \$149 million in 2016 primarily driven by derivative valuation adjustments; the prior year had a \$154 million gain, which included funding spread gains on fair value option elected liabilities. For additional information on

principal transactions revenue, see CIB segment results on pages 25-30 and Note 6.

Lending- and deposit-related fees were relatively flat. For information on lending- and deposit-related fees, see the segment results for CCB on pages 19-24, CIB on pages 25-30, and CB on pages 31-34.

Asset management, administration and commissions revenue decreased reflecting lower performance fees in AM, and lower brokerage commissions in CIB. For additional information on these fees and commissions, see the segment discussions of CCB on pages 19-24, AM on pages 35-38 and Note 6.

Mortgage fees and related income increased due to higher mortgage servicing rights ("MSR") risk management results and higher net production revenue on higher margins, partially offset by lower servicing revenue predominantly as a result of a lower level of third party loans serviced. For further information on mortgage fees and related income, see the segment discussion of CCB on pages 19-24 and Note 16.

Card income decreased predominantly driven by higher new account origination costs, and the impact of renegotiated co-brand partnership agreements, partially offset by higher card-related fees and card sales volume. For further information, see CCB segment results on pages 19-24.

Other income increased due to higher operating lease income reflecting growth in auto operating lease assets in CCB.

Net interest income increased primarily driven by loan growth across the businesses and the net impact of higher rates, partially offset by lower investment securities balances. The Firm's average interest-earning assets and net interest yield, on a fully taxable equivalent ("FTE") basis, were \$2.1 trillion and 2.24%, respectively.

Year-to-date results

Total net revenue increased by 2% primarily reflecting higher net interest income in the Firm's reportable business segments, and several gains in other income, partially offset by lower asset management fees in AM, lower investment banking fees in CIB, and lower card income in CCB.

Investment banking fees decreased due to lower equity and debt underwriting fees, partially offset by higher advisory fees. The decrease in equity and debt underwriting fees was driven by declines in industry-wide fee levels and, for debt underwriting fees, also due to fewer large acquisition financing deals. Advisory fees increased due to a greater share of fees for completed transactions.

Principal transactions revenue increased reflecting higher Fixed Income Markets revenue in Rates, Credit and Securitized Products in CIB. Rates performance was strong, with elevated market activity driven by central bank actions, and higher issuance-based flows. Credit and Securitized Products revenue improved as client risk appetite recovered driving higher primary and secondary market activity. The increase in Fixed Income Markets revenue was partially offset by the net results in Credit Adjustments & Other, which had a loss of \$447 million driven by derivative valuation adjustments and wider credit spreads; the prior year had a gain of \$274 million, which included funding spread gains on fair value option elected liabilities.

Lending- and deposit-related fees were relatively flat, with the increase in deposit fees associated with growth in business volume in CCB offset by lower lending-related service fees.

Asset management, administration and commissions revenue decreased reflecting the impact of weaker markets and lower performance fees in AM, and lower brokerage commissions and other fees in CIB and AM.

Mortgage fees and related income were relatively flat, with higher MSR risk management results offset by lower mortgage servicing revenue predominantly as a result of a lower level of third-party loans serviced.

Card income decreased predominantly driven by the impact of renegotiated co-brand partnership agreements and higher new account origination costs, partially offset by higher card sales volume and card-related fees. For further information, see CCB segment results on pages 19-24.

Other income increased predominantly reflecting higher operating lease income from growth in auto operating lease assets in CCB, a gain on the sale of Visa Europe interests in CCB, the impact of losses recorded in the prior year related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits, and a gain on sale of an asset in AM.

Net interest income increased primarily driven by loan growth across the businesses and the net impact of higher rates, partially offset by lower investment securities balances and higher interest expense on long-term debt largely associated with hedging activity. The Firm's average interest-earning assets and net interest yield, on a FTE basis, were \$2.1 trillion and 2.26%, respectively.

Provision for credit losses

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|---------------|-------------|---------------------------------|-----------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Consumer, excluding credit card | \$ 262 | \$ (389) | NM | \$ 578 | \$ (345) | NM |
| Credit card | 1,038 | 759 | 37% | 2,978 | 2,348 | 27% |
| Total consumer | 1,300 | 370 | 251% | 3,556 | 2,003 | 78% |
| Wholesale | (29) | 312 | NM | 941 | 573 | 64% |
| Total provision for credit losses | \$ 1,271 | \$ 682 | 86% | \$ 4,497 | \$ 2,576 | 75% |

Quarterly results

The provision for credit losses increased as a result of an addition to the consumer allowance for loan losses, compared with a reduction in the prior year. The addition to the consumer allowance was approximately \$225 million reflecting loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio. The prior-year provision reflected a \$575 million reduction in the residential real estate portfolio, due to the continued improvement in home prices and delinquencies, and increased granularity in the impairment estimates. The increase in the consumer provision for credit losses in the current quarter was partially offset by a benefit in the wholesale provision for credit losses, primarily driven by a net allowance reduction

of approximately \$50 million in the Oil & Gas portfolio as a result of paydowns, loan sales, and select upgrades, partially offset by select downgrades. The prior year wholesale provision for credit losses included a net allowance increase reflecting the impact of select downgrades, including within the Oil & Gas portfolio. For a more detailed discussion of the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 19-24, CIB on pages 25-30, CB on pages 31-34 and the Allowance for credit losses on pages 57-59.

Year-to-date results

The provision for credit losses increased as a result of net additions to the consumer allowance for loan losses, compared with reductions in the prior year. The additions to the consumer allowance were approximately \$400 million reflecting loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio; these were partially offset by reductions in the allowance for loan losses in the residential real estate portfolio due to continued improvement in home

prices and delinquencies, as well as runoff in the student loan portfolio. The prior-year provision reflected a \$1.0 billion reduction in the residential real estate portfolio, due to the continued improvement in home prices and delinquencies, and increased granularity in the impairment estimates, as well as runoff in the student loan portfolio. The provision for credit losses increased also in the current period as a result of additions to the wholesale allowance for credit losses, reflecting the impact of downgrades in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios.

Noninterest expense

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|------------------|-------------|---------------------------------|------------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Compensation expense | \$ 7,669 | \$ 7,320 | 5% | \$ 23,107 | \$ 23,057 | —% |
| Noncompensation expense: | | | | | | |
| Occupancy | 899 | 965 | (7) | 2,681 | 2,821 | (5) |
| Technology, communications and equipment | 1,741 | 1,546 | 13 | 5,024 | 4,536 | 11 |
| Professional and outside services | 1,665 | 1,776 | (6) | 4,913 | 5,178 | (5) |
| Marketing | 825 | 704 | 17 | 2,200 | 1,937 | 14 |
| Other expense ^{(a)(b)} | 1,664 | 3,057 | (46) | 4,013 | 7,222 | (44) |
| Total noncompensation expense | 6,794 | 8,048 | (16) | 18,831 | 21,694 | (13) |
| Total noninterest expense | \$ 14,463 | \$ 15,368 | (6)% | \$ 41,938 | \$ 44,751 | (6)% |

(a) Included firmwide legal expense of \$(71) million and \$1.3 billion for the three months ended September 30, 2016 and 2015, respectively, and \$(547) million and \$2.3 billion for the nine months ended September 30, 2016 and 2015, respectively

(b) Included FDIC-related expense of \$360 million and \$298 million for the three months ended September 30, 2016 and 2015, respectively, and \$912 million and \$916 million for the nine months ended September 30, 2016 and 2015, respectively.

Quarterly results

Total noninterest expense decreased by 6% driven by lower legal expense and the effect of continued expense initiatives, partially offset by higher compensation expense and investments and growth in the businesses.

Compensation expense increased predominantly driven by higher performance-based compensation expense and investments in the businesses, partially offset by the impact of continued expense reduction initiatives, including lower headcount in certain businesses.

Noncompensation expense decreased as a result of lower legal expense (including lower legal professional services expense), less utilization of contractors and reduced occupancy expense. These factors were partially offset by higher depreciation expense from growth in auto operating lease assets; higher investments in marketing; liabilities from a merchant bankruptcy in Commerce Solutions; a modest increase in reserves for mortgage servicing; and a net increase related to higher FDIC surcharges. For a further discussion of legal matters, see Note 23.

Year-to-date results

Total noninterest expense decreased by 6% driven by lower legal expense and the effect of continued expense initiatives, partially offset by investments and growth in the businesses.

Compensation expense was relatively flat, with higher performance-based compensation expense and investments in the businesses offset by the impact of continued expense reduction initiatives, including lower headcount in certain businesses.

Noncompensation expense decreased as a result of lower legal expense (including lower legal professional services expense); less utilization of contractors and reduced occupancy expense; lower regulatory-related expense; and the impact of the disposal of assets in AM. These factors were partially offset by higher depreciation expense from growth in auto operating lease assets; higher investments in marketing; liabilities from a merchant bankruptcy in Commerce Solutions; a modest increase in reserves for mortgage servicing; and the impact of a benefit recorded in the prior year from a franchise tax settlement. For a further discussion of legal matters, see Note 23.

Income tax expense

| (in millions, except rate) | Three months ended September 30, | | | Nine months ended September 30, | | |
|----------------------------------|----------------------------------|----------|--------|---------------------------------|-----------|--------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Income before income tax expense | \$ 8,939 | \$ 6,730 | 33% | \$ 25,857 | \$ 23,331 | 11% |
| Income tax expense/(benefit) | 2,653 | (74) | NM | 7,851 | 4,323 | 82 |
| Effective tax rate | 29.7% | (1.1)% | | 30.4% | 18.5% | |

Quarterly results

The effective tax rate in the current quarter was affected by the change in mix of income and expense subject to U.S. federal and state and local taxes. The effective tax rate in 2015 was affected by \$2.2 billion of tax benefits, which reduced the Firm's effective tax rate by 32.0 percentage points. The recognition of tax benefits in 2015 resulted from the resolution of various tax audits, as well as the release of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities.

Year-to-date results

The effective tax rate in the current period was affected by changes in the mix of income and expense subject to U.S. federal and state and local taxes, and tax benefits from the adoption of new accounting guidance related to employee stock-based incentive payments. The effective tax rate in 2015 was affected by \$2.7 billion of tax benefits, which reduced the Firm's effective tax rate by 11.7 percentage points. The recognition of tax benefits in 2015 resulted from the resolution of various tax audits, as well as the release of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities. For additional details on the impact of the new accounting guidance, see Accounting and Reporting Developments on pages 82-83.

CONSOLIDATED BALANCE SHEETS ANALYSIS

Consolidated balance sheets overview

The following is a discussion of the significant changes between September 30, 2016, and December 31, 2015.

Selected Consolidated balance sheets data

| (in millions) | Sep 30, 2016 | Dec 31, 2015 | Change |
|---|---------------------|---------------------|-----------|
| Assets | | | |
| Cash and due from banks | \$ 21,390 | \$ 20,490 | 4% |
| Deposits with banks | 396,200 | 340,015 | 17 |
| Federal funds sold and securities purchased under resale agreements | 232,637 | 212,575 | 9 |
| Securities borrowed | 109,197 | 98,721 | 11 |
| Trading assets: | | | |
| Debt and equity instruments | 309,258 | 284,162 | 9 |
| Derivative receivables | 65,579 | 59,677 | 10 |
| Securities | 272,401 | 290,827 | (6) |
| Loans | 888,054 | 837,299 | 6 |
| Allowance for loan losses | (14,204) | (13,555) | 5 |
| Loans, net of allowance for loan losses | 873,850 | 823,744 | 6 |
| Accrued interest and accounts receivable | 64,333 | 46,605 | 38 |
| Premises and equipment | 14,208 | 14,362 | (1) |
| Goodwill | 47,302 | 47,325 | — |
| Mortgage servicing rights | 4,937 | 6,608 | (25) |
| Other intangible assets | 887 | 1,015 | (13) |
| Other assets | 108,850 | 105,572 | 3 |
| Total assets | \$ 2,521,029 | \$ 2,351,698 | 7% |

Cash and due from banks and deposits with banks

The increase was primarily due to deposit growth and an increase in long-term debt. The Firm's excess cash is placed with various central banks, predominantly Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements

The increase was due to the deployment of excess cash by Treasury, and higher demand for securities to cover short positions related to client-driven market-making activities in CIB. For additional information on the Firm's Liquidity Risk Management, see pages 74–78.

Securities borrowed

The increase was driven by higher demand for securities to cover short positions related to client-driven market-making activities in CIB.

Trading assets and liabilities—debt and equity instruments

The increase in trading assets and liabilities was predominantly related to client-driven market-making activities in CIB. The increase in trading assets reflected higher debt instruments to facilitate client demand resulting in increased inventory levels, partially offset by lower equity instruments. The increase in trading liabilities reflected higher levels of short positions in both debt and equity instruments. For additional information, refer to Note 3.

Trading assets and liabilities—derivative receivables and payables

The change in derivative receivables and payables was predominantly related to client-driven market-making activities in CIB. The increase in derivative receivables reflected the impact of market movements, which increased interest rate receivables. The decrease in derivative payables reflected the impact of market movements, which reduced foreign exchange and commodity payables and increased interest rate payables.

For additional information, refer to Derivative contracts on pages 55–56, and Notes 3 and 5.

Securities

The decrease was predominantly due to net sales, maturities and paydowns of non-U.S. residential mortgage-backed securities ("MBS") and corporate debt securities reflecting a shift to loans. For additional information, see Notes 3 and 11.

Loans and allowance for loan losses

The increase in loans was driven by higher wholesale and consumer loans. The increase in wholesale loans was driven by strong originations of commercial and industrial loans in CB and CIB, and commercial real estate loans in CB. The increase in consumer loans was due to retention of originated high-quality prime mortgages in CCB and AM, and growth in auto and credit card loans in CCB.

The increase in the allowance for loan losses was attributable to additions to both the consumer and wholesale allowances. The increase in the consumer allowance was primarily driven by loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio; these were partially offset by reductions in the allowance for loan losses in the residential real estate portfolio due to continued improvement in home prices and delinquencies, and runoff in the student loan portfolio. The increase in the wholesale allowance reflected downgrades in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios. For a more detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 43–59, and Notes 3, 4, 13 and 14.

Accrued interest and accounts receivable

The increase was driven by higher client receivables related to client-driven market-making activities in CIB.

Mortgage servicing rights

For additional information on MSRs, see Note 16.

Other assets

The modest increase reflected higher auto operating lease assets from growth in business volume.

Selected Consolidated balance sheets data (continued)

| (in millions) | Sep 30, 2016 | Dec 31, 2015 | Change |
|---|---------------------|---------------------|-----------|
| Liabilities | | | |
| Deposits | \$ 1,376,138 | \$ 1,279,715 | 8% |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 168,491 | 152,678 | 10 |
| Commercial paper | 12,258 | 15,562 | (21) |
| Other borrowed funds | 24,479 | 21,105 | 16 |
| Trading liabilities: | | | |
| Debt and equity instruments | 95,126 | 74,107 | 28 |
| Derivative payables | 48,143 | 52,790 | (9) |
| Accounts payable and other liabilities | 190,412 | 177,638 | 7 |
| Beneficial interests issued by consolidated variable interest entities ("VIEs") | 42,233 | 41,879 | 1 |
| Long-term debt | 309,418 | 288,651 | 7 |
| Total liabilities | 2,266,698 | 2,104,125 | 8 |
| Stockholders' equity | 254,331 | 247,573 | 3 |
| Total liabilities and stockholders' equity | \$ 2,521,029 | \$ 2,351,698 | 7% |

Deposits

The increase was attributable to higher wholesale and consumer deposits. The increase in wholesale deposits was mainly driven by growth in client activity in CIB's Treasury Services business, and inflows in AM partly related to the new rules governing money market funds. The increase in consumer deposits reflected continuing strong growth from existing and new customers, and the impact of low attrition rates. For more information on deposits, refer to the Liquidity Risk Management discussion on pages 74-78; and Notes 3 and 17.

Federal funds purchased and securities loaned or sold under repurchase agreements

The increase was predominantly due to higher client-driven market-making activities in CIB. For additional information on the Firm's Liquidity Risk Management, see pages 74-78.

Commercial paper

The decrease reflected lower issuance in the wholesale markets consistent with Treasury's short-term funding plans. For additional information, see Liquidity Risk Management on pages 74-78.

Accounts payable and other liabilities

The increase was driven by higher client payables related to client-driven market-making activities in CIB.

Long-term debt

The increase was due to net issuance consistent with Treasury's long-term funding plans, which included liquidity actions related to the 2016 Resolution Submission. For additional information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 74-78.

Stockholders' equity

The increase was due to net income and higher accumulated other comprehensive income ("AOCI"), partially offset by cash dividends on common and preferred stock and repurchases of common stock. For additional information on changes in stockholders' equity, see page 88, and on the Firm's capital actions, see Capital actions on page 72.

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 21 of this Form 10-Q and Off-Balance Sheet Arrangements and Contractual Cash Obligations on pages 77-78 and Note 29 of JPMorgan Chase’s 2015 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 15 of this Form 10-Q, and Note 1 and Note 16 of JPMorgan Chase’s 2015 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 Investor 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 September 30, 2016, and December 31, 2015, was \$3.7 billion and \$8.7 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 \$9.1 billion and \$5.6 billion at September 30, 2016, and December 31, 2015, respectively. The Firm could facilitate the refinancing of some of the clients’ assets in order to reduce the funding obligation. For further information,

see the discussion of Firm-administered multiseller conduits in Note 15.

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 15 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 55 and Note 21 (including the table that presents the related amounts by contractual maturity as of September 30, 2016). For a discussion of liabilities associated with loan sales and securitization-related indemnifications, see Note 21.

CONSOLIDATED CASH FLOWS ANALYSIS

Consolidated cash flows overview

The following is a discussion of cash flow activities during the nine months ended September 30, 2016 and 2015.

| (in millions) | Nine months ended September 30, | |
|--|------------------------------------|------------|
| | 2016 | 2015 |
| Net cash provided by/(used in) | | |
| Operating activities | \$ (18,715) | \$ 57,299 |
| Investing activities | (112,102) | 79,722 |
| Financing activities | 131,699 | (143,513) |
| Effect of exchange rate changes on cash | 18 | (81) |
| Net increase/(decrease) in cash and due from banks | \$ 900 | \$ (6,573) |

Operating activities

Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes cash flows from operations, available cash balances and its capacity to generate cash through secured and unsecured sources are sufficient to meet the Firm's operating liquidity needs.

Cash used in operating activities in 2016 resulted from client-driven market-making activities in CIB that resulted in an increase in trading assets, which were largely offset by an increase in trading liabilities; an increase in accrued interest and accounts receivables driven by higher client receivables; and an increase in securities borrowed driven by higher demand for securities to cover short positions; and higher net originations and purchases of loans held-for-sale. In 2016 and 2015, cash was also provided by net income after noncash operating adjustments. In 2015, cash was provided by a decrease in trading assets predominantly due to lower client-driven market-making activities in CIB resulting in lower levels of equity securities; and higher net proceeds from loan securitizations and sales activities. These outflows were partially offset by a decrease in accounts payable and other liabilities due to lower brokerage customer payables related to client activity in CIB.

Investing activities

Cash used in investing activities during 2016 resulted from net originations of consumer and wholesale loans; an increase in deposits with banks primarily due to growth in deposits and an increase in long-term debt; and an increase in securities purchased under resale agreements due to the deployment of excess cash by Treasury and higher demand for securities to cover short positions related to client-driven market-making activities in CIB. Partially offsetting these cash outflows were net proceeds from paydowns, maturities, sales and purchases of investment securities. Cash provided by investing activities during 2015 predominantly reflected a net decrease in deposits with banks due to the Firm's actions to reduce wholesale non-operating deposits; and net proceeds from paydowns,

maturities, sales and purchases of investment securities. Partially offsetting these net inflows was cash used for net originations of consumer and wholesale loans.

Financing activities

Cash provided by financing activities in 2016 resulted from higher consumer and wholesale deposits; an increase in securities loaned or sold under repurchase agreements predominantly due to higher client-driven market-making activities in CIB; and higher net proceeds from long-term borrowings consistent with Treasury's long-term funding plans, which included liquidity actions related to the 2016 Resolution Submission. Cash used in financing activities in 2015 reflected the aforementioned actions to reduce wholesale non-operating deposits, partially offset by higher consumer deposits; and lower levels of commercial paper due to the discontinuation of a cash management product (which offered customers the option of sweeping their deposits into commercial paper) and lower issuances in the wholesale markets. Partially offsetting these outflows were net proceeds from long-term borrowings and the issuance of preferred stock. For both periods, cash was used for repurchases of common stock and dividends on common and preferred stock.

* * *

For a further discussion of the activities affecting the Firm's cash flows, see Consolidated Balance Sheets Analysis on pages 12-13, Capital Management on pages 67-73, and Liquidity Risk Management on pages 74-78 of this Form 10-Q, and page 75 of JPMorgan Chase's 2015 Annual Report.

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 85–89. 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 an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of

revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

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

Additionally, certain credit metrics and ratios disclosed by the Firm exclude PCI loans, and are therefore non-GAAP measures. For additional information on these non-GAAP measures, see Credit Risk Management on pages 43–59.

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 September 30, | | | | | |
|----------------------------------|----------------------------------|---|---------------|------------------|---|---------------|
| | 2016 | | | 2015 | | |
| | Reported results | Fully taxable-equivalent adjustments ^(a) | Managed basis | Reported results | Fully taxable-equivalent adjustments ^(a) | Managed basis |
| Other income | \$ 782 | \$ 540 | \$ 1,322 | \$ 628 | \$ 477 | \$ 1,105 |
| Total noninterest revenue | 13,070 | 540 | 13,610 | 11,856 | 477 | 12,333 |
| Net interest income | 11,603 | 299 | 11,902 | 10,924 | 278 | 11,202 |
| Total net revenue | 24,673 | 839 | 25,512 | 22,780 | 755 | 23,535 |
| Pre-provision profit | 10,210 | 839 | 11,049 | 7,412 | 755 | 8,167 |
| Income before income tax expense | 8,939 | 839 | 9,778 | 6,730 | 755 | 7,485 |
| Income tax expense | \$ 2,653 | \$ 839 | \$ 3,492 | \$ (74) | \$ 755 | \$ 681 |
| Overhead ratio | 59% | NM | 57% | 67% | NM | 65% |

| (in millions, except ratios) | Nine months ended September 30, | | | | | |
|----------------------------------|---------------------------------|---|---------------|------------------|---|---------------|
| | 2016 | | | 2015 | | |
| | Reported results | Fully taxable-equivalent adjustments ^(a) | Managed basis | Reported results | Fully taxable-equivalent adjustments ^(a) | Managed basis |
| Other income | \$ 2,844 | \$ 1,620 | \$ 4,464 | \$ 1,796 | \$ 1,405 | \$ 3,201 |
| Total noninterest revenue | 37,962 | 1,620 | 39,582 | 38,373 | 1,405 | 39,778 |
| Net interest income | 34,330 | 897 | 35,227 | 32,285 | 823 | 33,108 |
| Total net revenue | 72,292 | 2,517 | 74,809 | 70,658 | 2,228 | 72,886 |
| Pre-provision profit | 30,354 | 2,517 | 32,871 | 25,907 | 2,228 | 28,135 |
| Income before income tax expense | 25,857 | 2,517 | 28,374 | 23,331 | 2,228 | 25,559 |
| Income tax expense | \$ 7,851 | \$ 2,517 | \$ 10,368 | \$ 4,323 | \$ 2,228 | \$ 6,551 |
| Overhead ratio | 58% | NM | 56% | 63% | NM | 61% |

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

Net interest income excluding markets-based activities

In addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding CIB's markets-based activities to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities.

The data presented below are non-GAAP financial measures due to the exclusion of CIB's markets-based activities. 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.

Net interest income excluding CIB markets-based activities data

| (in millions, except rates) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|---------------------|-----------|---------------------------------|---------------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Net interest income – managed basis ^{(a)(b)} | \$ 11,902 | \$ 11,202 | 6% | \$ 35,227 | \$ 33,108 | 6% |
| Less: Markets-based net interest income ^(c) | 1,442 | 1,164 | 24 | 4,240 | 3,661 | 16 |
| Net interest income excluding markets^(a) | \$ 10,460 | \$ 10,038 | 4 | \$ 30,987 | \$ 29,447 | 5 |
| Average interest-earning assets | \$ 2,116,493 | \$ 2,056,890 | 3 | \$ 2,080,133 | \$ 2,100,773 | (1) |
| Less: Average markets-based interest-earning assets | 488,971 | 476,120 | 3 | 490,364 | 495,460 | (1) |
| Average interest-earning assets excluding markets | \$ 1,627,522 | \$ 1,580,770 | 3% | \$ 1,589,769 | \$ 1,605,313 | (1)% |
| Net interest yield on average interest-earning assets – managed basis | 2.24% | 2.16% | | 2.26% | 2.11% | |
| Net interest yield on average markets-based interest-earning assets | 1.17 | 0.97 | | 1.15 | 0.99 | |
| Net interest yield on average interest-earning assets excluding markets | 2.56% | 2.52% | | 2.60% | 2.45% | |

(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 16

(c) Markets-based net interest income, in the table above, is lower than the net interest income line item in the CIB Markets table on page 29 by \$183 million and by \$129 million for the three months ended September 30, 2016 and 2015, respectively, and by \$463 million and by \$358 million, for the nine months ended September 30, 2016 and 2015, respectively. The primary difference is markets-based net interest income, in the table above, excludes net interest income from loans held in CIB Markets.

Key performance measures

Tangible common equity ("TCE"), ROTCE and TBVPS are considered key financial performance 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 meaningful to 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.

Tangible common equity

| (in millions, except per share and ratio data) | Period-end | | Average | | | |
|--|-------------------|-------------------|----------------------------------|-------------------|---------------------------------|-------------------|
| | Sep 30, 2016 | Dec 31, 2015 | Three months ended September 30, | | Nine months ended September 30, | |
| | | | 2016 | 2015 | 2016 | 2015 |
| Common stockholders' equity | \$ 228,263 | \$ 221,505 | \$ 226,089 | \$ 217,023 | \$ 224,034 | \$ 214,389 |
| Less: Goodwill | 47,302 | 47,325 | 47,302 | 47,428 | 47,314 | 47,468 |
| Less: Certain identifiable intangible assets | 887 | 1,015 | 903 | 1,064 | 938 | 1,112 |
| Add: Deferred tax liabilities ^(a) | 3,232 | 3,148 | 3,226 | 2,991 | 3,205 | 2,909 |
| Tangible common equity | \$ 183,306 | \$ 176,313 | \$ 181,110 | \$ 171,522 | \$ 178,987 | \$ 168,718 |
| Return on tangible common equity | NA | NA | 13% | 15% | 13% | 14% |
| Tangible book value per share | \$ 51.23 | \$ 48.13 | NA | NA | 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.

The Firm's capital, risk-weighted assets ("RWA"), and capital and leverage ratios that are presented under Basel III Standardized and Advanced Fully Phased-In rules and the Firm's, JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s SLRs calculated under the Basel III Advanced Fully Phased-In rules are considered key regulatory capital measures. Such measures are used by banking regulators, investors and analysts 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 Management on pages 67–73.

Core loans are also considered a key performance measure. Core loans include 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 meaningful to 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 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 16-17.

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were a stand-alone business. The management reporting process that derives business segment results allocates income and expense using

market-based methodologies. The Firm also assesses the level of capital required for each line of business on at least an annual basis. For further information about line of business capital, see Line of business equity on page 71.

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

For a further discussion of those methodologies, see Business Segment Results - Description of business segment reporting methodology on pages 83-84 of JPMorgan Chase's 2015 Annual Report.

The following discussions of the business segment results are based on a comparison of the three and nine months ended September 30, 2016 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 September 30, (in millions) | Total net revenue | | | Total noninterest expense | | | Pre-provision profit/(loss) | | |
|---|-------------------|------------------|-----------|---------------------------|------------------|-------------|-----------------------------|-----------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Consumer & Community Banking | \$ 11,328 | \$ 10,879 | 4% | \$ 6,510 | \$ 6,237 | 4% | \$ 4,818 | \$ 4,642 | 4% |
| Corporate & Investment Bank | 9,455 | 8,168 | 16 | 4,934 | 6,131 | (20) | 4,521 | 2,037 | 122 |
| Commercial Banking | 1,870 | 1,644 | 14 | 746 | 719 | 4 | 1,124 | 925 | 22 |
| Asset Management | 3,047 | 2,894 | 5 | 2,130 | 2,109 | 1 | 917 | 785 | 17 |
| Corporate | (188) | (50) | NM | 143 | 172 | (17) | (331) | (222) | (49) |
| Total | \$ 25,512 | \$ 23,535 | 8% | \$ 14,463 | \$ 15,368 | (6)% | \$ 11,049 | \$ 8,167 | 35% |

| Three months ended September 30, (in millions, except ratios) | Provision for credit losses | | | Net income/(loss) | | | Return on common equity | |
|--|-----------------------------|---------------|------------|-------------------|-----------------|-------------|-------------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change | 2016 | 2015 |
| Consumer & Community Banking | \$ 1,294 | \$ 389 | 233% | \$ 2,204 | \$ 2,630 | (16)% | 16% | 20% |
| Corporate & Investment Bank | 67 | 232 | (71) | 2,912 | 1,464 | 99 | 17 | 8 |
| Commercial Banking | (121) | 82 | NM | 778 | 518 | 50 | 18 | 14 |
| Asset Management | 32 | (17) | NM | 557 | 475 | 17 | 24 | 20 |
| Corporate | (1) | (4) | 75 | (165) | 1,717 | NM | NM | NM |
| Total | \$ 1,271 | \$ 682 | 86% | \$ 6,286 | \$ 6,804 | (8)% | 10% | 12% |

| Nine months ended September 30, (in millions) | Total net revenue | | | Total noninterest expense | | | Pre-provision profit/(loss) | | |
|--|-------------------|------------------|-----------|---------------------------|------------------|-------------|-----------------------------|------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Consumer & Community Banking | \$ 33,896 | \$ 32,598 | 4% | \$ 18,602 | \$ 18,637 | —% | \$ 15,294 | \$ 13,961 | 10% |
| Corporate & Investment Bank | 26,755 | 26,473 | 1 | 14,820 | 16,925 | (12) | 11,935 | 9,548 | 25 |
| Commercial Banking | 5,490 | 5,125 | 7 | 2,190 | 2,131 | 3 | 3,300 | 2,994 | 10 |
| Asset Management | 8,958 | 9,074 | (1) | 6,303 | 6,690 | (6) | 2,655 | 2,384 | 11 |
| Corporate | (290) | (384) | 24 | 23 | 368 | (94) | (313) | (752) | 58 |
| Total | \$ 74,809 | \$ 72,886 | 3% | \$ 41,938 | \$ 44,751 | (6)% | \$ 32,871 | \$ 28,135 | 17% |

| Nine months ended September 30, (in millions, except ratios) | Provision for credit losses | | | Net income/(loss) | | | Return on common equity | |
|---|-----------------------------|-----------------|------------|-------------------|------------------|-------------|-------------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change | 2016 | 2015 |
| Consumer & Community Banking | \$ 3,545 | \$ 2,021 | 75% | \$ 7,350 | \$ 7,382 | —% | 18% | 18% |
| Corporate & Investment Bank | 761 | 251 | 203 | 7,384 | 6,342 | 16 | 14 | 13 |
| Commercial Banking | 158 | 325 | (51) | 1,970 | 1,641 | 20 | 15 | 15 |
| Asset Management | 37 | (13) | NM | 1,665 | 1,428 | 17 | 24 | 20 |
| Corporate | (4) | (8) | 50 | (363) | 2,215 | NM | NM | NM |
| Total | \$ 4,497 | \$ 2,576 | 75% | \$ 18,006 | \$ 19,008 | (5)% | 10% | 11% |

CONSUMER & COMMUNITY BANKING

For a discussion of the business profile of CCB, see pages 85–93 of JPMorgan Chase’s 2015 Annual Report and Line of Business Metrics on page 177.

Selected income statement data

| (in millions, except ratios) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|-----------------|-------------|---------------------------------|-----------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue | | | | | | |
| Lending- and deposit-related fees | \$ 841 | \$ 836 | 1% | \$ 2,390 | \$ 2,320 | 3% |
| Asset management, administration and commissions | 531 | 565 | (6) | 1,596 | 1,648 | (3) |
| Mortgage fees and related income | 624 | 469 | 33 | 1,980 | 1,955 | 1 |
| Card income | 1,099 | 1,335 | (18) | 3,543 | 4,165 | (15) |
| All other income | 773 | 524 | 48 | 2,303 | 1,466 | 57 |
| Noninterest revenue | 3,868 | 3,729 | 4 | 11,812 | 11,554 | 2 |
| Net interest income | 7,460 | 7,150 | 4 | 22,084 | 21,044 | 5 |
| Total net revenue | 11,328 | 10,879 | 4 | 33,896 | 32,598 | 4 |
| Provision for credit losses | 1,294 | 389 | 233 | 3,545 | 2,021 | 75 |
| Noninterest expense | | | | | | |
| Compensation expense | 2,453 | 2,413 | 2 | 7,255 | 7,421 | (2) |
| Noncompensation expense ^(a) | 4,057 | 3,824 | 6 | 11,347 | 11,216 | 1 |
| Total noninterest expense | 6,510 | 6,237 | 4 | 18,602 | 18,637 | – |
| Income before income tax expense | 3,524 | 4,253 | (17) | 11,749 | 11,940 | (2) |
| Income tax expense | 1,320 | 1,623 | (19) | 4,399 | 4,558 | (3) |
| Net income | \$ 2,204 | \$ 2,630 | (16) | \$ 7,350 | \$ 7,382 | – |
| Revenue by line of business | | | | | | |
| Consumer & Business Banking | \$ 4,719 | \$ 4,555 | 4 | \$ 13,885 | \$ 13,396 | 4 |
| Mortgage Banking | 1,874 | 1,555 | 21 | 5,671 | 5,137 | 10 |
| Card, Commerce Solutions & Auto | 4,735 | 4,769 | (1) | 14,340 | 14,065 | 2 |
| Mortgage fees and related income details: | | | | | | |
| Net production revenue | 247 | 176 | 40 | 670 | 646 | 4 |
| Net mortgage servicing revenue ^(b) | 377 | 293 | 29 | 1,310 | 1,309 | – |
| Mortgage fees and related income | \$ 624 | \$ 469 | 33% | \$ 1,980 | \$ 1,955 | 1% |
| Financial ratios | | | | | | |
| Return on common equity | 16% | 20% | | 18% | 18% | |
| Overhead ratio | 57 | 57 | | 55 | 57 | |

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 \$504 million and \$372 million for the three months ended September 30, 2016 and 2015, respectively, and \$1.4 billion and \$1.0 billion for the nine months ended September 30, 2016 and 2015, respectively.
- (b) Included MSR risk management of \$38 million and \$(123) million for the three months ended September 30, 2016 and 2015, respectively, and \$240 million and \$(121) million for the nine months ended September 30, 2016 and 2015, respectively.

Quarterly results

Consumer & Community Banking net income was \$2.2 billion, a decrease of 16%, driven by higher provision for credit losses and noninterest expense, partially offset by higher net revenue.

Net revenue was \$11.3 billion, an increase of 4%. Net interest income was \$7.5 billion, up 4%, driven by higher deposit balances and higher loan balances, partially offset by an increase in the reserve for uncollectible interest and fees and deposit spread compression. Noninterest revenue was \$3.9 billion, up 4%, driven by higher auto lease and card sales volume, higher MSR risk management results, net production revenue, reflecting higher mortgage production margins, and higher card-related fees, predominantly offset by higher new account origination costs and the impact of renegotiated co-brand partnership agreements in Credit Card. See Note 16 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

The provision for credit losses was \$1.3 billion, compared to \$389 million in the prior year, reflecting increases in the allowance for loan losses. The current-quarter provision included a \$225 million increase in the allowance for loan losses, reflecting loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio. The prior-year provision reflected a \$575 million reduction in the allowance for loan losses in the residential real estate portfolio due to continued improvement in home prices and delinquencies, and increased granularity in the impairment estimates.

Noninterest expense was \$6.5 billion, an increase of 4%, driven by higher auto lease depreciation, higher investment in marketing, liabilities from a merchant bankruptcy in Commerce Solutions, and a modest increase in reserves for mortgage servicing, partially offset by lower legal expense and branch efficiencies.

Year-to-date results

Consumer & Community Banking net income of \$7.4 billion was flat compared with the prior year, driven by a higher provision for credit losses, offset by higher net revenue.

Net revenue was \$33.9 billion, an increase of 4%. Net interest income was \$22.1 billion, up 5%, driven by higher deposit balances and higher loan balances, partially offset by deposit spread compression and an increase in the reserve for uncollectible interest and fees. Noninterest revenue was \$11.8 billion, up 2%, driven by higher auto lease and card sales volume, higher MSR risk management results, a gain on the sale of Visa Europe interests and higher card- and deposit-related fees, predominantly offset by the impact of renegotiated co-brand partnership agreements and higher new account origination costs in Credit Card, and lower mortgage servicing revenue predominantly as a result of a lower level of third-party loans serviced. See Note 16 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

The provision for credit losses was \$3.5 billion, an increase of 75%, reflecting increases in the allowance for loan losses. The current-year provision included a \$400 million increase in the allowance for loan losses, reflecting loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio; these were partially offset by reductions in the allowance for loan losses in the residential real estate portfolio due to continued improvement in home prices and delinquencies, as well as runoff in the student loan portfolio. The prior-year provision reflected a \$1.0 billion reduction in the allowance for loan losses in the residential real estate portfolio due to continued improvement in home prices and delinquencies, and increased granularity in the impairment estimates, as well as runoff in the student loan portfolio.

Noninterest expense of \$18.6 billion was flat compared with the prior year, driven by lower legal expense, branch efficiencies and lower headcount-related expense, offset by higher auto lease depreciation and higher investment in marketing.

Selected metrics

| (in millions, except headcount) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|----------------|-----------|---|----------------|-----------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Selected balance sheet data (period-end) | | | | | | |
| Total assets | \$ 521,276 | \$ 484,253 | 8% | \$ 521,276 | \$ 484,253 | 8% |
| Loans: | | | | | | |
| Consumer & Business Banking | 23,846 | 22,346 | 7 | 23,846 | 22,346 | 7 |
| Home equity | 52,445 | 60,849 | (14) | 52,445 | 60,849 | (14) |
| Residential mortgage and other | 181,564 | 153,730 | 18 | 181,564 | 153,730 | 18 |
| Mortgage Banking | 234,009 | 214,579 | 9 | 234,009 | 214,579 | 9 |
| Credit Card | 133,435 | 126,979 | 5 | 133,435 | 126,979 | 5 |
| Auto | 64,512 | 57,174 | 13 | 64,512 | 57,174 | 13 |
| Student | 7,354 | 8,462 | (13) | 7,354 | 8,462 | (13) |
| Total loans | 463,156 | 429,540 | 8 | 463,156 | 429,540 | 8 |
| Core loans | 371,060 | 320,415 | 16 | 371,060 | 320,415 | 16 |
| Deposits | 605,117 | 539,182 | 12 | 605,117 | 539,182 | 12 |
| Common equity | 51,000 | 51,000 | — | 51,000 | 51,000 | — |
| Selected balance sheet data (average) | | | | | | |
| Total assets | \$ 521,882 | \$ 478,914 | 9 | \$ 512,550 | \$ 465,782 | 10 |
| Loans: | | | | | | |
| Consumer & Business Banking | 23,678 | 22,069 | 7 | 23,227 | 21,709 | 7 |
| Home equity | 53,501 | 62,025 | (14) | 55,604 | 64,442 | (14) |
| Residential mortgage and other | 180,669 | 146,432 | 23 | 175,059 | 133,341 | 31 |
| Mortgage Banking | 234,170 | 208,457 | 12 | 230,663 | 197,783 | 17 |
| Credit Card | 132,713 | 126,305 | 5 | 129,481 | 125,294 | 3 |
| Auto | 64,068 | 56,412 | 14 | 62,998 | 55,744 | 13 |
| Student | 7,490 | 8,622 | (13) | 7,759 | 8,911 | (13) |
| Total loans | 462,119 | 421,865 | 10 | 454,128 | 409,441 | 11 |
| Core loans | 367,999 | 309,888 | 19 | 356,072 | 291,728 | 22 |
| Deposits | 593,671 | 535,987 | 11 | 579,741 | 525,951 | 10 |
| Common equity | 51,000 | 51,000 | — | 51,000 | 51,000 | — |
| Headcount | 132,092 | 128,601 | 3% | 132,092 | 128,601 | 3% |

Selected metrics

| (in millions, except ratio data) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|-----------------|-----------|---|-----------------|-----------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Credit data and quality statistics | | | | | | |
| Nonaccrual loans ^{(a)(b)} | \$ 4,853 | \$ 5,433 | (11)% | \$ 4,853 | \$ 5,433 | (11)% |
| Net charge-offs/(recoveries) ^(c) | | | | | | |
| Consumer & Business Banking | 71 | 50 | 42 | 180 | 177 | 2 |
| Home equity | 42 | 82 | (49) | 136 | 238 | (43) |
| Residential mortgage and other | 7 | (41) | NM | 11 | (12) | NM |
| Mortgage Banking | 49 | 41 | 20 | 147 | 226 | (35) |
| Credit Card | 838 | 759 | 10 | 2,528 | 2,348 | 8 |
| Auto | 79 | 57 | 39 | 192 | 140 | 37 |
| Student | 32 | 58 | (45) | 98 | 155 | (37) |
| Total net charge-offs/(recoveries) | \$ 1,069 | \$ 965 | 11 | \$ 3,145 | \$ 3,046 | 3 |
| Net charge-off/(recovery) rate ^(c) | | | | | | |
| Consumer & Business Banking | 1.19% | 0.90% | | 1.04% | 1.09% | |
| Home equity ^(d) | 0.42 | 0.70 | | 0.44 | 0.66 | |
| Residential mortgage and other ^(d) | 0.02 | (0.14) | | 0.01 | (0.02) | |
| Mortgage Banking ^(d) | 0.10 | 0.10 | | 0.10 | 0.20 | |
| Credit Card ^(e) | 2.51 | 2.41 | | 2.61 | 2.54 | |
| Auto | 0.49 | 0.40 | | 0.41 | 0.34 | |
| Student | 1.70 | 2.67 | | 1.69 | 2.33 | |
| Total net charge-off/(recovery) rate^(d) | 1.00 | 1.02 | | 1.01 | 1.12 | |
| 30+ day delinquency rate | | | | | | |
| Mortgage Banking ^{(f)(g)} | 1.27% | 1.74% | | 1.27% | 1.74% | |
| Credit Card ^(h) | 1.53 | 1.38 | | 1.53 | 1.38 | |
| Auto | 1.08 | 1.06 | | 1.08 | 1.06 | |
| Student ⁽ⁱ⁾ | 1.81 | 1.99 | | 1.81 | 1.99 | |
| 90+ day delinquency rate – Credit Card ^(h) | 0.75 | 0.66 | | 0.75 | 0.66 | |
| Allowance for loan losses | | | | | | |
| Consumer & Business Banking | \$ 703 | \$ 703 | – | \$ 703 | \$ 703 | – |
| Mortgage Banking excluding PCI loans | 1,488 | 1,588 | (6) | 1,488 | 1,588 | (6) |
| Mortgage Banking – PCI loans ^(c) | 2,618 | 2,788 | (6) | 2,618 | 2,788 | (6) |
| Credit Card | 3,884 | 3,434 | 13 | 3,884 | 3,434 | 13 |
| Auto | 474 | 374 | 27 | 474 | 374 | 27 |
| Student | 274 | 324 | (15) | 274 | 324 | (15) |
| Total allowance for loan losses^(c) | \$ 9,441 | \$ 9,211 | 2% | \$ 9,441 | \$ 9,211 | 2% |

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

(b) At September 30, 2016 and 2015, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of \$5.0 billion and \$6.6 billion, respectively; and (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program (“FFELP”) of \$259 million and \$289 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 September 30, 2016 and 2015, excluded \$36 million and \$52 million, respectively, and for the nine months ended September 30, 2016 and 2015, excluded \$124 million and \$162 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 58.

(d) Excludes the impact of PCI loans. For the three months ended September 30, 2016 and 2015, the net charge-off rates including the impact of PCI loans were as follows: (1) home equity of 0.31% and 0.52%, respectively; (2) residential mortgage and other of 0.02% and (0.11%), respectively; (3) Mortgage Banking of 0.08% and 0.08%, respectively; and (4) total CCB of 0.92% and 0.91%, respectively. For the nine months ended September 30, 2016 and 2015, the net charge-off rates including the impact of PCI loans were as follows: (1) home equity of 0.33% and 0.49%, respectively; (2) residential mortgage and other of 0.01% and (0.01%), respectively; (3) Mortgage Banking of 0.09% and 0.15%, respectively; and (4) total CCB of 0.93% and 1.00%, respectively.

(e) Average credit card loans included loans held-for-sale of \$87 million and \$1.3 billion for the three months ended September 30, 2016 and 2015, respectively, and \$80 million and \$1.9 billion for the nine months ended September 30, 2016 and 2015, respectively. These amounts are excluded when calculating the net charge-off rate.

(f) At September 30, 2016 and 2015, excluded mortgage loans insured by U.S. government agencies of \$7.0 billion and \$8.5 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(g) Excludes PCI loans. The 30+ day delinquency rate for PCI loans was 10.01% and 11.29% at September 30, 2016 and 2015, respectively.

(h) Period-end credit card loans included loans held-for-sale of \$89 million and \$1.3 billion at September 30, 2016 and 2015, respectively. These amounts are excluded when calculating delinquency rates.

(i) Excluded student loans insured by U.S. government agencies under FFELP of \$461 million and \$507 million at September 30, 2016 and 2015, respectively, that are 30 or more days past due. These amounts have 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 September 30, | | | As of or for the nine months ended September 30, | | |
|--|--|----------------|------------|---|----------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Business Metrics | | | | | | |
| CCB households (in millions) | 59.7 | 57.5 | 4% | 59.7 | 57.5 | 4% |
| Number of branches | 5,310 | 5,471 | (3) | 5,310 | 5,471 | (3) |
| Active digital customers (in thousands) ^(a) | 43,657 | 38,511 | 13 | 43,657 | 38,511 | 13 |
| Active mobile customers (in thousands) ^(b) | 26,047 | 22,232 | 17 | 26,047 | 22,232 | 17 |
| Consumer & Business Banking | | | | | | |
| Average deposits | \$ 576.6 | \$ 519.4 | 11 | \$ 564.2 | \$ 510.0 | 11 |
| Deposit margin | 1.79% | 1.86% | | 1.82% | 1.92% | |
| Business banking origination volume | \$ 1.8 | \$ 1.7 | 5 | \$ 5.7 | \$ 5.2 | 10 |
| Client investment assets | 231.6 | 213.3 | 9 | 231.6 | 213.3 | 9 |
| Mortgage Banking | | | | | | |
| Mortgage origination volume by channel | | | | | | |
| Retail | \$ 11.7 | \$ 9.5 | 23 | \$ 31.6 | \$ 27.4 | 15 |
| Correspondent | 15.4 | 20.4 | (25) | 42.9 | 56.5 | (24) |
| Total mortgage origination volume^(c) | \$ 27.1 | \$ 29.9 | (9) | \$ 74.5 | \$ 83.9 | (11) |
| Total loans serviced (period-end) | \$ 863.3 | \$ 929.0 | (7) | \$ 863.3 | \$ 929.0 | (7) |
| Third-party mortgage loans serviced (period-end) | 609.2 | 702.6 | (13) | 609.2 | 702.6 | (13) |
| MSR carrying value (period-end) | 4.9 | 6.7 | (27) | 4.9 | 6.7 | (27) |
| Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) | 0.80% | 0.95% | | 0.80% | 0.95% | |
| MSR revenue multiple ^(d) | 2.29x | 2.79x | | 2.29x | 2.71x | |
| Credit Card, excluding Commercial Card | | | | | | |
| Sales volume | \$ 139.2 | \$ 126.6 | 10 | \$ 396.9 | \$ 365.1 | 9 |
| New accounts opened (in millions) | 2.7 | 2.0 | 35 | 7.7 | 6.2 | 24 |
| Card Services | | | | | | |
| Net revenue rate | 11.04% | 12.22% | | 11.70% | 12.25% | |
| Commerce Solutions | | | | | | |
| Merchant processing volume | \$ 267.2 | \$ 235.8 | 13 | \$ 778.5 | \$ 691.1 | 13 |
| Auto | | | | | | |
| Loan and lease origination volume | \$ 9.3 | \$ 8.1 | 15 | \$ 27.4 | \$ 23.2 | 18 |
| Average Auto operating lease assets | 11.4 | 8.1 | 41% | 10.5 | 7.5 | 40% |

(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 \$30.9 billion and \$32.2 billion for the three months ended September 30, 2016 and 2015, respectively, and \$83.9 billion and \$90.5 billion for the nine months ended September 30, 2016 and 2015, 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 entered into various Consent Orders and settlements with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential MBS activities. The majority of these Consent Orders and settlements have been resolved and/or terminated; 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 remains 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 certain other obligations under mortgage-related settlements are the subject of ongoing reporting to various regulators and independent overseers. The Firm's compliance with certain of these settlements is detailed in periodic reports published by the independent overseers. The Firm is committed to fulfilling its commitments with appropriate diligence.

CORPORATE & INVESTMENT BANK

For a discussion of the business profile of CIB, see pages 94–98 of JPMorgan Chase's 2015 Annual Report and Line of Business Metrics on page 177.

Selected income statement data

| (in millions, except ratios) | Three months ended September 30, | | | Nine months ended September 30, | | |
|---|----------------------------------|-----------------|-------------|---------------------------------|-----------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue | | | | | | |
| Investment banking fees | \$ 1,855 | \$ 1,612 | 15% | \$ 4,812 | \$ 5,198 | (7)% |
| Principal transactions | 3,282 | 2,370 | 38 | 8,717 | 8,509 | 2 |
| Lending- and deposit-related fees | 402 | 389 | 3 | 1,181 | 1,186 | – |
| Asset management, administration and commissions | 968 | 1,083 | (11) | 3,062 | 3,418 | (10) |
| All other income | 183 | 294 | (38) | 927 | 744 | 25 |
| Noninterest revenue | 6,690 | 5,748 | 16 | 18,699 | 19,055 | (2) |
| Net interest income | 2,765 | 2,420 | 14 | 8,056 | 7,418 | 9 |
| Total net revenue^(a) | 9,455 | 8,168 | 16 | 26,755 | 26,473 | 1 |
| Provision for credit losses | 67 | 232 | (71) | 761 | 251 | 203 |
| Noninterest expense | | | | | | |
| Compensation expense | 2,513 | 2,434 | 3 | 7,850 | 8,113 | (3) |
| Noncompensation expense | 2,421 | 3,697 | (35) | 6,970 | 8,812 | (21) |
| Total noninterest expense | 4,934 | 6,131 | (20) | 14,820 | 16,925 | (12) |
| Income before income tax expense | 4,454 | 1,805 | 147 | 11,174 | 9,297 | 20 |
| Income tax expense | 1,542 | 341 | 352 | 3,790 | 2,955 | 28 |
| Net income | \$ 2,912 | \$ 1,464 | 99% | \$ 7,384 | \$ 6,342 | 16% |
| Financial ratios | | | | | | |
| Return on common equity | 17% | 8% | | 14% | 13% | |
| Overhead ratio | 52 | 75 | | 55 | 64 | |
| Compensation expense as a percentage of total net revenue | 27 | 30 | | 29 | 31 | |

(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; as well as tax-exempt income from municipal bonds of \$483 million and \$417 million for the three months ended September 30, 2016 and 2015, respectively and \$1.5 billion and \$1.2 billion for the nine months ended September 30, 2016 and 2015, respectively.

Selected income statement data

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|-----------------|------------|---------------------------------|------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue by business | | | | | | |
| Investment Banking | \$ 1,740 | \$ 1,530 | 14% | \$ 4,463 | \$ 4,906 | (9)% |
| Treasury Services | 917 | 899 | 2 | 2,693 | 2,730 | (1) |
| Lending | 283 | 334 | (15) | 862 | 1,071 | (20) |
| Total Banking | 2,940 | 2,763 | 6 | 8,018 | 8,707 | (8) |
| Fixed Income Markets | 4,334 | 2,933 | 48 | 11,890 | 10,018 | 19 |
| Equity Markets | 1,414 | 1,403 | 1 | 4,590 | 4,630 | (1) |
| Securities Services | 916 | 915 | – | 2,704 | 2,844 | (5) |
| Credit Adjustments & Other ^(a) | (149) | 154 | NM | (447) | 274 | NM |
| Total Markets & Investor Services | 6,515 | 5,405 | 21 | 18,737 | 17,766 | 5 |
| Total net revenue | \$ 9,455 | \$ 8,168 | 16% | \$ 26,755 | \$ 26,473 | 1% |

(a) Effective January 1, 2016, consists primarily of credit valuation adjustments (“CVA”) managed by the Credit Portfolio Group, funding valuation adjustments (“FVA”) and DVA on derivatives. Results are primarily reported in Principal transactions. Prior periods also include DVA on fair value option elected liabilities. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets. Effective January 1, 2016, changes in DVA on fair value option elected liabilities is recognized in OCI. For additional information, see Accounting and Reporting Developments on pages 82–83, and Notes 3, 4 and 19.

Quarterly results

Net income was \$2.9 billion, up 99%, reflecting higher net revenue and lower noninterest expense.

Banking revenue was \$2.9 billion, up 6%. Investment banking revenue was \$1.7 billion, up 14%, with strong performance across products. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Debt underwriting fees were up 12%, the highest third quarter on record with strong industry-wide bond issuance. Equity underwriting fees were up 38%, primarily driven by growth in industry-wide issuance, with a stable market backdrop and strong investor demand. Advisory fees were up 8%, driven by a greater share of fees for completed transactions. Treasury Services revenue was \$917 million, up 2%. Lending revenue was \$283 million, down 15%, reflecting fair value losses on hedges of accrual loans as well as lower losses on securities received from restructuring.

Markets & Investor Services revenue was \$6.5 billion, up 21%, driven by higher Markets revenue, up 33%. Clients were active and risk management conditions were favorable. Fixed Income Markets revenue was up 48% reflecting broad based strength across products. Rates performance was particularly strong, with good client activity, as markets remained active throughout the quarter, post the Brexit vote and in anticipation of central bank actions as well as money market reform. Credit and Securitized Products revenue was also higher, driven by improving market sentiment across primary and secondary markets which produced robust issuance volumes and strong client trading activity. Equity Markets revenue was up 1%, compared to a strong prior-year quarter, reflecting continued strength in Asia and strength in North America derivatives, offset by weakness in cash equities volumes. Securities Services revenue remained flat from the prior year. Credit Adjustments & Other was a loss of \$149 million, primarily driven by derivative valuation adjustments, compared with a \$154 million gain in the prior-year quarter, which included funding spread gains on fair value option elected liabilities.

The provision for credit losses was \$67 million, down \$165 million from the prior-year. The current quarter reflected a lower reserve build in the Oil & Gas portfolio.

Noninterest expense was \$4.9 billion, down 20%, driven by lower legal expense.

Year-to-date results

Net income was \$7.4 billion, up 16%, reflecting lower noninterest expense, partially offset by higher provision for credit losses.

Banking revenue was \$8.0 billion, down 8%. Investment banking revenue was \$4.5 billion, down 9%, driven by lower equity and debt underwriting fees, partially offset by higher advisory fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Equity underwriting fees were down 23%, driven by declines in industry-wide fee levels. Debt underwriting fees were down 8%, primarily driven by declines in industry-wide fee levels and fewer large acquisition financing deals. Advisory fees were up 5%, driven by a greater share of fees for completed transactions. Treasury Services revenue was \$2.7 billion, down 1%. Lending revenue was \$862 million, down 20%, reflecting fair value losses on hedges of accrual loans as well as gains on securities received from restructuring, compared to losses in the prior year.

Markets & Investor Services revenue was \$18.7 billion, up 5%. Fixed Income Markets revenue of \$11.9 billion was up 19%, driven by higher revenue in Rates, Credit and Securitized Products. Rates performance was strong, with elevated market activity driven by central bank actions as well as high issuance-based flows. Credit and Securitized Products revenue improved as client risk appetite recovered driving higher primary and secondary market activity. Equity Markets revenue of \$4.6 billion was down 1%, compared to a strong prior-year. Securities Services revenue was \$2.7 billion, down 5%, largely driven by lower fees and commissions. Credit Adjustments and Other was a loss of \$447 million driven by derivative valuation adjustments and wider credit spreads, compared with a \$274 million gain in the prior-year, which included funding spread gains on fair value option elected liabilities.

The provision for credit losses was \$761 million, compared with \$251 million in the prior year, primarily reflecting increases in the allowance for credit losses in the Oil & Gas portfolio and, to a lesser extent, the Metals & Mining portfolio.

Noninterest expense was \$14.8 billion, down 12%, largely driven by lower legal expense.

Selected metrics

| (in millions, except headcount) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|----------------|-----------|---|----------------|-----------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Selected balance sheet data (period-end) | | | | | | |
| Assets | \$ 825,933 | \$ 801,133 | 3% | \$ 825,933 | \$ 801,133 | 3% |
| Loans: | | | | | | |
| Loans retained ^(a) | 117,133 | 101,420 | 15 | 117,133 | 101,420 | 15 |
| Loans held-for-sale and loans at fair value | 4,184 | 3,369 | 24 | 4,184 | 3,369 | 24 |
| Total loans | 121,317 | 104,789 | 16 | 121,317 | 104,789 | 16 |
| Core loans | 120,885 | 104,270 | 16 | 120,885 | 104,270 | 16 |
| Common equity | 64,000 | 62,000 | 3 | 64,000 | 62,000 | 3 |
| Selected balance sheet data (average) | | | | | | |
| Assets | \$ 811,217 | \$ 789,975 | 3 | \$ 808,228 | \$ 833,233 | (3) |
| Trading assets-debt and equity instruments | 306,431 | 288,828 | 6 | 299,350 | 306,072 | (2) |
| Trading assets-derivative receivables | 63,829 | 63,561 | — | 62,619 | 69,904 | (10) |
| Loans: | | | | | | |
| Loans retained ^(a) | 110,941 | 97,518 | 14 | 110,442 | 97,108 | 14 |
| Loans held-for-sale and loans at fair value | 3,864 | 3,827 | 1 | 3,414 | 4,463 | (24) |
| Total loans | 114,805 | 101,345 | 13 | 113,856 | 101,571 | 12 |
| Core loans | 114,380 | 100,809 | 13 | 113,410 | 100,730 | 13 |
| Common equity | 64,000 | 62,000 | 3 | 64,000 | 62,000 | 3 |
| Headcount | 49,176 | 49,384 | —% | 49,176 | 49,384 | —% |

(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 September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|--------------|------------|---|--------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Credit data and quality statistics | | | | | | |
| Net charge-offs/(recoveries) | \$ 3 | \$ 2 | 50% | \$ 139 | \$ (24) | NM |
| Nonperforming assets: | | | | | | |
| Nonaccrual loans: | | | | | | |
| Nonaccrual loans retained ^(a) | 614 | 464 | 32% | 614 | 464 | 32 |
| Nonaccrual loans held-for-sale and loans at fair value | 26 | 12 | 117 | 26 | 12 | 117 |
| Total nonaccrual loans | 640 | 476 | 34 | 640 | 476 | 34 |
| Derivative receivables | 232 | 235 | (1) | 232 | 235 | (1) |
| Assets acquired in loan satisfactions | 75 | 56 | 34 | 75 | 56 | 34 |
| Total nonperforming assets | 947 | 767 | 23 | 947 | 767 | 23 |
| Allowance for credit losses: | | | | | | |
| Allowance for loan losses | 1,611 | 1,205 | 34 | 1,611 | 1,205 | 34 |
| Allowance for lending-related commitments | 837 | 547 | 53 | 837 | 547 | 53 |
| Total allowance for credit losses | 2,448 | 1,752 | 40% | 2,448 | 1,752 | 40% |
| Net charge-off/(recovery) rate | 0.01% | 0.01% | | 0.17% | (0.03)% | |
| Allowance for loan losses to period-end loans retained | 1.38 | 1.19 | | 1.38 | 1.19 | |
| Allowance for loan losses to period-end loans retained, excluding trade finance and conduits ^(b) | 2.02 | 1.85 | | 2.02 | 1.85 | |
| Allowance for loan losses to nonaccrual loans retained ^(a) | 262 | 260 | | 262 | 260 | |
| Nonaccrual loans to total period-end loans | 0.53% | 0.45% | | 0.53% | 0.45 % | |

(a) Allowance for loan losses of \$202 million and \$160 million were held against these nonaccrual loans at September 30, 2016 and 2015, respectively.

(b) 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.

Business metrics

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--------------------------------------|----------------------------------|-----------------|------------|---------------------------------|-----------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Advisory | \$ 542 | \$ 503 | 8% | \$ 1,593 | \$ 1,511 | 5% |
| Equity underwriting | 370 | 269 | 38 | 860 | 1,120 | (23) |
| Debt underwriting | 943 | 840 | 12 | 2,359 | 2,567 | (8) |
| Total investment banking fees | \$ 1,855 | \$ 1,612 | 15% | \$ 4,812 | \$ 5,198 | (7)% |

League table results – wallet share

| | Nine months ended September 30, 2016 | | Full-year 2015 | |
|---|---|------|-----------------|------|
| | Share | Rank | Share | Rank |
| <i>Based on fees^(a)</i> | | | | |
| Debt, equity and equity-related | | | | |
| Global | 7.4% | # 1 | 7.7% | # 1 |
| U.S. | 12.1 | 1 | 11.7 | 1 |
| Long-term debt^(b) | | | | |
| Global | 7.0 | 1 | 8.3 | 1 |
| U.S. | 11.0 | 2 | 12.0 | 1 |
| Equity and equity-related | | | | |
| Global ^(c) | 8.0 | 1 | 7.0 | 1 |
| U.S. | 14.1 | 1 | 11.3 | 1 |
| M&A^(d) | | | | |
| Global | 9.4 | 2 | 8.4 | 2 |
| U.S. | 11.3 | 2 | 9.9 | 2 |
| Loan syndications | | | | |
| Global | 7.7 | 2 | 7.5 | 1 |
| U.S. | 9.3 | 2 | 10.8 | 2 |
| Global investment banking fees^(e) | 8.1% # 1 | | 7.9% # 1 | |

(a) Source: Dealogic. 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 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 reflects 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.

Business metrics

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|-------------------------------------|-----------------|------------|------------------------------------|------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Total Markets^(a) | | | | | | |
| Principal transactions | \$ 3,465 | \$ 2,255 | 54% | \$ 9,350 | \$ 8,328 | 12% |
| Lending- and deposit-related fees | 55 | 49 | 12 | 165 | 149 | 11 |
| Asset management, administration and commissions | 442 | 536 | (18) | 1,459 | 1,602 | (9) |
| All other income | 161 | 203 | (21) | 803 | 550 | 46 |
| Noninterest revenue | 4,123 | 3,043 | 35 | 11,777 | 10,629 | 11 |
| Net interest income | 1,625 | 1,293 | 26 | 4,703 | 4,019 | 17 |
| Total net revenue | \$ 5,748 | \$ 4,336 | 33% | \$ 16,480 | \$ 14,648 | 13% |

(a) Represents both Fixed Income Markets and Equity Markets revenue.

| (in millions, except where otherwise noted) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|--|--|------------------|----------|---|------------------|----------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Assets under custody ("AUC") by asset class (period-end) (in billions): | | | | | | |
| Fixed Income | \$ 12,857 | \$ 12,190 | 5% | \$ 12,857 | \$ 12,190 | 5% |
| Equity | 6,440 | 5,848 | 10 | 6,440 | 5,848 | 10 |
| Other ^(a) | 1,927 | 1,653 | 17 | 1,927 | 1,653 | 17 |
| Total AUC | \$ 21,224 | \$ 19,691 | 8 | \$ 21,224 | \$ 19,691 | 8 |
| Client deposits and other third party liabilities (average) ^(b) | \$ 381,542 | \$ 372,070 | 3 | \$ 371,417 | \$ 405,576 | (8) |
| Trade finance loans (period-end) | 16,957 | 21,138 | (20)% | 16,957 | 21,138 | (20)% |

(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 September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|-------------------|-----------|---|-------------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Total net revenue^(a) | | | | | | |
| Europe/Middle East/Africa | \$ 2,798 | \$ 2,508 | 12% | \$ 8,078 | \$ 8,689 | (7)% |
| Asia/Pacific | 1,281 | 1,224 | 5 | 3,793 | 3,845 | (1) |
| Latin America/Caribbean | 307 | 300 | 2 | 1,031 | 851 | 21 |
| Total international net revenue | 4,386 | 4,032 | 9 | 12,902 | 13,385 | (4) |
| North America | 5,069 | 4,136 | 23 | 13,853 | 13,088 | 6 |
| Total net revenue | \$ 9,455 | \$ 8,168 | 16 | \$ 26,755 | \$ 26,473 | 1 |
| Loans retained (period-end)^(a) | | | | | | |
| Europe/Middle East/Africa | \$ 32,016 | \$ 25,793 | 24 | \$ 32,016 | \$ 25,793 | 24 |
| Asia/Pacific | 15,262 | 17,453 | (13) | 15,262 | 17,453 | (13) |
| Latin America/Caribbean | 8,896 | 8,418 | 6 | 8,896 | 8,418 | 6 |
| Total international loans | 56,174 | 51,664 | 9 | 56,174 | 51,664 | 9 |
| North America | 60,959 | 49,756 | 23 | 60,959 | 49,756 | 23 |
| Total loans retained | \$ 117,133 | \$ 101,420 | 15 | \$ 117,133 | \$ 101,420 | 15 |
| Client deposits and other third-party liabilities (average)^{(a)(b)} | | | | | | |
| Europe/Middle East/Africa | \$ 138,628 | \$ 130,247 | 6 | \$ 135,201 | \$ 146,155 | (7) |
| Asia/Pacific | 70,301 | 66,101 | 6 | 67,158 | 67,259 | — |
| Latin America/Caribbean | 22,802 | 21,462 | 6 | 22,555 | 22,800 | (1) |
| Total international | \$ 231,731 | \$ 217,810 | 6 | \$ 224,914 | \$ 236,214 | (5) |
| North America | 149,811 | 154,260 | (3) | 146,503 | 169,362 | (13) |
| Total client deposits and other third-party liabilities | \$ 381,542 | \$ 372,070 | 3 | \$ 371,417 | \$ 405,576 | (8) |
| AUC (period-end) (in billions)^(a) | | | | | | |
| North America | \$ 12,685 | \$ 11,944 | 6 | \$ 12,685 | \$ 11,944 | 6 |
| All other regions | 8,539 | 7,747 | 10 | 8,539 | 7,747 | 10 |
| Total AUC | \$ 21,224 | \$ 19,691 | 8% | \$ 21,224 | \$ 19,691 | 8% |

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

(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

COMMERCIAL BANKING

For a discussion of the business profile of CB, see pages 99–101 of JPMorgan Chase’s 2015 Annual Report and Line of Business Metrics on page 178.

Selected income statement data

| (in millions) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|---------------|------------|---------------------------------|-----------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue | | | | | | |
| Lending- and deposit-related fees | \$ 228 | \$ 229 | – % | \$ 687 | \$ 708 | (3)% |
| Asset management, administration and commissions | 14 | 22 | (36) | 54 | 68 | (21) |
| All other income ^(a) | 336 | 271 | 24 | 979 | 991 | (1) |
| Noninterest revenue | 578 | 522 | 11 | 1,720 | 1,767 | (3) |
| Net interest income | 1,292 | 1,122 | 15 | 3,770 | 3,358 | 12 |
| Total net revenue^(b) | 1,870 | 1,644 | 14 | 5,490 | 5,125 | 7 |
| Provision for credit losses | (121) | 82 | NM | 158 | 325 | (51) |
| Noninterest expense | | | | | | |
| Compensation expense | 343 | 311 | 10 | 999 | 928 | 8 |
| Noncompensation expense | 403 | 408 | (1) | 1,191 | 1,203 | (1) |
| Total noninterest expense | 746 | 719 | 4 | 2,190 | 2,131 | 3 |
| Income before income tax expense | 1,245 | 843 | 48 | 3,142 | 2,669 | 18 |
| Income tax expense | 467 | 325 | 44 | 1,172 | 1,028 | 14 |
| Net income | \$ 778 | \$ 518 | 50% | \$ 1,970 | \$ 1,641 | 20% |

(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 activity of \$127 million and \$116 million for the three months ended September 30, 2016 and 2015, respectively and \$371 million and \$344 million for the nine months ended September 30, 2016 and 2015, respectively.

Quarterly results

Net income was \$778 million, an increase of 50%, driven by higher net revenue and a lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was \$1.9 billion, an increase of 14%. Net interest income was \$1.3 billion, up 15%, driven by higher average loan balances and deposit spreads. Noninterest revenue was \$578 million, up 11%, driven by higher investment banking revenue.

Noninterest expense was \$746 million, up 4%, driven by investments in technology and increased hiring of bankers and business-related support staff.

The provision for credit losses was a benefit of \$121 million largely driven by the Oil & Gas portfolio largely due to loan sales; the prior year provision for credit losses was \$82 million reflecting a modest increase in the allowance for loan losses for Oil & Gas exposure.

Year-to-date results

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

Net revenue was \$5.5 billion, up 7%. Net interest income was \$3.8 billion, up 12%, driven by higher average loan balances and deposit spreads. Noninterest revenue was \$1.7 billion, down 3%, driven by lower lending- and deposit-related fees.

Noninterest expense was \$2.2 billion, up 3%, driven by investments in technology and increased hiring of bankers and business-related support staff.

The provision for credit losses was \$158 million, reflecting downgrades in the Oil & Gas and Natural Gas Pipeline portfolios; the prior year provision for credit losses was \$325 million reflecting an increase in the allowance for loan losses for Oil & Gas exposure and other select downgrades.

Selected income statement data (continued)

| (in millions, except ratios) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|-----------------|------------|---------------------------------|-----------------|-----------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue by product | | | | | | |
| Lending | \$ 956 | \$ 850 | 12% | \$ 2,801 | \$ 2,542 | 10% |
| Treasury services | 693 | 633 | 9 | 2,067 | 1,926 | 7 |
| Investment banking ^(a) | 203 | 130 | 56 | 565 | 574 | (2) |
| Other | 18 | 31 | (42) | 57 | 83 | (31) |
| Total Commercial Banking net revenue | \$ 1,870 | \$ 1,644 | 14 | \$ 5,490 | \$ 5,125 | 7 |
| Investment banking revenue, gross ^(b) | \$ 600 | \$ 382 | 57 | \$ 1,678 | \$ 1,724 | (3) |
| Revenue by client segment^(c) | | | | | | |
| Middle Market Banking | \$ 716 | \$ 668 | 7 | \$ 2,121 | \$ 2,012 | 5 |
| Corporate Client Banking | 612 | 484 | 26 | 1,758 | 1,664 | 6 |
| Commercial Term Lending | 350 | 318 | 10 | 1,053 | 944 | 12 |
| Real Estate Banking | 117 | 92 | 27 | 328 | 262 | 25 |
| Other | 75 | 82 | (9) | 230 | 243 | (5) |
| Total Commercial Banking net revenue | \$ 1,870 | \$ 1,644 | 14% | \$ 5,490 | \$ 5,125 | 7% |
| Financial ratios | | | | | | |
| Return on common equity | 18% | 14% | | 15% | 15% | |
| Overhead ratio | 40 | 44 | | 40 | 42 | |

(a) Includes total Firm revenue from investment banking products sold to CB clients, net of revenue sharing with the CIB.

(b) Represents total Firm revenue from investment banking products sold to CB clients.

(c) Certain clients were transferred from Middle Market Banking to Corporate Client Banking and from Real Estate Banking to Corporate Client Banking effective in the second and third quarter of 2016, respectively. Prior period client segment amounts were revised to conform with the current period presentation.

Selected metrics

| (in millions, except headcount) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|-------------------|-----------|---|-------------------|-----------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Selected balance sheet data (period-end) | | | | | | |
| Total assets | \$ 212,189 | \$ 201,157 | 5% | \$ 212,189 | \$ 201,157 | 5% |
| Loans: | | | | | | |
| Loans retained | 185,609 | 162,269 | 14 | 185,609 | 162,269 | 14 |
| Loans held-for-sale and loans at fair value | 191 | 213 | (10) | 191 | 213 | (10) |
| Total loans | \$ 185,800 | \$ 162,482 | 14 | \$ 185,800 | \$ 162,482 | 14 |
| Core loans | 185,354 | 161,662 | 15 | 185,354 | 161,662 | 15 |
| Common equity | 16,000 | 14,000 | 14 | 16,000 | 14,000 | 14 |
| Period-end loans by client segment^(a) | | | | | | |
| Middle Market Banking | \$ 53,584 | \$ 51,067 | 5 | \$ 53,584 | \$ 51,067 | 5 |
| Corporate Client Banking | 43,514 | 35,163 | 24 | 43,514 | 35,163 | 24 |
| Commercial Term Lending | 69,133 | 60,684 | 14 | 69,133 | 60,684 | 14 |
| Real Estate Banking | 13,905 | 10,457 | 33 | 13,905 | 10,457 | 33 |
| Other | 5,664 | 5,111 | 11 | 5,664 | 5,111 | 11 |
| Total Commercial Banking loans | \$ 185,800 | \$ 162,482 | 14 | \$ 185,800 | \$ 162,482 | 14 |
| Selected balance sheet data (average) | | | | | | |
| Total assets | \$ 208,765 | \$ 197,274 | 6 | \$ 205,748 | \$ 197,319 | 4 |
| Loans: | | | | | | |
| Loans retained | 180,962 | 158,845 | 14 | 175,695 | 154,595 | 14 |
| Loans held-for-sale and loans at fair value | 517 | 359 | 44 | 516 | 595 | (13) |
| Total loans | \$ 181,479 | \$ 159,204 | 14 | \$ 176,211 | \$ 155,190 | 14 |
| Core loans | 181,016 | 158,364 | 14 | 175,651 | 154,240 | 14 |
| Average loans by client segment^(a) | | | | | | |
| Middle Market Banking | \$ 52,648 | \$ 50,436 | 4 | \$ 51,718 | \$ 50,136 | 3 |
| Corporate Client Banking | 42,139 | 34,314 | 23 | 40,870 | 33,454 | 22 |
| Commercial Term Lending | 67,696 | 59,323 | 14 | 65,486 | 56,980 | 15 |
| Real Estate Banking | 13,382 | 10,074 | 33 | 12,597 | 9,640 | 31 |
| Other | 5,614 | 5,057 | 11 | 5,540 | 4,980 | 11 |
| Total Commercial Banking loans | \$ 181,479 | \$ 159,204 | 14 | \$ 176,211 | \$ 155,190 | 14 |
| Client deposits and other third-party liabilities | 173,696 | 180,892 | (4) | 172,502 | 195,874 | (12) |
| Common equity | 16,000 | 14,000 | 14 | 16,000 | 14,000 | 14 |
| Headcount | 8,333 | 7,735 | 8% | 8,333 | 7,735 | 8% |

(a) Certain clients were transferred from Middle Market Banking to Corporate Client Banking and from Real Estate Banking to Corporate Client Banking effective in the second and third quarter of 2016, respectively. Prior period client segment amounts were revised to conform with the current period presentation.

| Selected metrics (continued) (in millions, except ratios) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|--------------|------------|---|--------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Credit data and quality statistics | | | | | | |
| Net charge-offs/(recoveries) | \$ 44 | \$ (2) | NM | \$ 110 | \$ 5 | NM |
| Nonperforming assets | | | | | | |
| Nonaccrual loans: | | | | | | |
| Nonaccrual loans retained ^(a) | 1,212 | 423 | 187 | 1,212 | 423 | 187 |
| Nonaccrual loans held-for-sale and loans at fair value | — | 16 | (100) | — | 16 | (100) |
| Total nonaccrual loans | 1,212 | 439 | 176 | 1,212 | 439 | 176 |
| Assets acquired in loan satisfactions | 1 | 4 | (75) | 1 | 4 | (75) |
| Total nonperforming assets | 1,213 | 443 | 174 | 1,213 | 443 | 174 |
| Allowance for credit losses: | | | | | | |
| Allowance for loan losses | 2,858 | 2,782 | 3 | 2,858 | 2,782 | 3 |
| Allowance for lending-related commitments | 244 | 170 | 44 | 244 | 170 | 44 |
| Total allowance for credit losses | 3,102 | 2,952 | 5% | 3,102 | 2,952 | 5% |
| Net charge-off/(recovery) rate ^(b) | 0.10% | —% | | 0.08% | —% | |
| Allowance for loan losses to period-end loans retained | 1.54 | 1.71 | | 1.54 | 1.71 | |
| Allowance for loan losses to nonaccrual loans retained ^(a) | 236 | 658 | | 236 | 658 | |
| Nonaccrual loans to period-end total loans | 0.65 | 0.27 | | 0.65 | 0.27 | |

(a) Allowance for loan losses of \$221 million and \$80 million was held against nonaccrual loans retained at September 30, 2016 and 2015, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET MANAGEMENT

For a discussion of the business profile of AM, see pages 102-104 of JPMorgan Chase's 2015 Annual Report and Line of Business Metrics on pages 178-179.

Selected income statement data

| (in millions, except ratios) | Three months ended September 30, | | | Nine months ended September 30, | | |
|--|----------------------------------|-----------------|-----------|---------------------------------|-----------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue | | | | | | |
| Asset management, administration and commissions | \$ 2,087 | \$ 2,237 | (7)% | \$ 6,205 | \$ 6,847 | (9)% |
| All other income | 190 | 24 | NM | 509 | 342 | 49 |
| Noninterest revenue | 2,277 | 2,261 | 1 | 6,714 | 7,189 | (7) |
| Net interest income | 770 | 633 | 22 | 2,244 | 1,885 | 19 |
| Total net revenue | 3,047 | 2,894 | 5 | 8,958 | 9,074 | (1) |
| Provision for credit losses | 32 | (17) | NM | 37 | (13) | NM |
| Noninterest expense | | | | | | |
| Compensation expense | 1,279 | 1,218 | 5 | 3,769 | 3,806 | (1) |
| Noncompensation expense | 851 | 891 | (4) | 2,534 | 2,884 | (12) |
| Total noninterest expense | 2,130 | 2,109 | 1 | 6,303 | 6,690 | (6) |
| Income before income tax expense | 885 | 802 | 10 | 2,618 | 2,397 | 9 |
| Income tax expense | 328 | 327 | — | 953 | 969 | (2) |
| Net income | \$ 557 | \$ 475 | 17 | \$ 1,665 | \$ 1,428 | 17 |
| Revenue by line of business | | | | | | |
| Global Investment Management | \$ 1,497 | \$ 1,483 | 1 | \$ 4,420 | \$ 4,686 | (6) |
| Global Wealth Management | 1,550 | 1,411 | 10 | 4,538 | 4,388 | 3 |
| Total net revenue | \$ 3,047 | \$ 2,894 | 5% | \$ 8,958 | \$ 9,074 | (1)% |
| Financial ratios | | | | | | |
| Return on common equity | 24% | 20% | | 24% | 20% | |
| Overhead ratio | 70 | 73 | | 70 | 74 | |
| Pre-tax margin ratio: | | | | | | |
| Global Investment Management | 31 | 31 | | 31 | 29 | |
| Global Wealth Management | 27 | 24 | | 27 | 24 | |
| Asset Management | 29 | 28 | | 29 | 26 | |

Quarterly results

Net income was \$557 million, an increase of 17%, reflecting higher net revenue.

Net revenue was \$3.0 billion, an increase of 5%, driven by higher net interest income due to higher deposit and loan spreads, and loan growth.

Noninterest expense was \$2.1 billion, an increase of 1%, driven by higher performance-based compensation.

Year-to-date results

Net income was \$1.7 billion, an increase of 17%, reflecting lower noninterest expense, partially offset by lower net revenue.

Net revenue was \$9.0 billion, a decrease of 1%. Net interest income was \$2.2 billion, up 19%, driven by higher deposit and loan spreads, and loan growth. Noninterest revenue was \$6.7 billion, down 7%, driven by weaker markets, lower performance fees and lower brokerage activity.

Noninterest expense was \$6.3 billion, a decrease of 6%, due to lower legal expense as well as a reduction of expense related to the disposal of assets.

| Selected metrics (in millions, except ranking data, headcount and ratios) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|--|---------------|------------|---|---------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| % of JPM mutual fund assets rated as 4- or 5-star ^(a) | 56% | 57% | | 56% | 57% | |
| % of JPM mutual fund assets ranked in 1 st or 2 nd quartile: ^(b) | | | | | | |
| 1 year | 47 | 79 | | 47 | 79 | |
| 3 years | 75 | 82 | | 75 | 82 | |
| 5 years | 80 | 81 | | 80 | 81 | |
| Selected balance sheet data (period-end) | | | | | | |
| Total assets | \$ 137,295 | \$ 131,412 | 4% | \$ 137,295 | \$ 131,412 | 4% |
| Loans ^(c) | 116,043 | 110,314 | 5 | 116,043 | 110,314 | 5 |
| Core loans | 116,043 | 110,314 | 5 | 116,043 | 110,314 | 5 |
| Deposits | 157,274 | 140,121 | 12 | 157,274 | 140,121 | 12 |
| Common equity | 9,000 | 9,000 | — | 9,000 | 9,000 | — |
| Selected balance sheet data (average) | | | | | | |
| Total assets | \$ 134,920 | \$ 131,100 | 3 | \$ 132,090 | \$ 129,326 | 2 |
| Loans | 114,201 | 108,741 | 5 | 112,142 | 106,446 | 5 |
| Core loans | 114,201 | 108,741 | 5 | 112,142 | 106,446 | 5 |
| Deposits | 153,121 | 141,896 | 8 | 151,656 | 150,840 | 1 |
| Common equity | 9,000 | 9,000 | — | 9,000 | 9,000 | — |
| Headcount | 21,142 | 20,651 | 2 | 21,142 | 20,651 | 2 |
| Number of client advisors | 2,560 | 2,796 | (8) | 2,560 | 2,796 | (8) |
| Credit data and quality statistics | | | | | | |
| Net charge-offs | \$ 5 | \$ 2 | 150 | \$ 16 | \$ 4 | 300 |
| Nonaccrual loans | 372 | 229 | 62 | 372 | 229 | 62 |
| Allowance for credit losses: | | | | | | |
| Allowance for loan losses | 285 | 258 | 10 | 285 | 258 | 10 |
| Allowance for lending-related commitments | 5 | 4 | 25 | 5 | 4 | 25 |
| Total allowance for credit losses | 290 | 262 | 11% | 290 | 262 | 11% |
| Net charge-off rate | 0.02% | 0.01% | | 0.02% | 0.01% | |
| Allowance for loan losses to period-end loans | 0.25 | 0.23 | | 0.25 | 0.23 | |
| Allowance for loan losses to nonaccrual loans | 77 | 113 | | 77 | 113 | |
| Nonaccrual loans to period-end loans | 0.32 | 0.21 | | 0.32 | 0.21 | |

- (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 Global Investment 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 Global Investment 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 \$30.7 billion and \$25.4 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at September 30, 2016 and 2015, respectively.

Client assets

Client assets of \$2.4 trillion and assets under management of \$1.8 trillion were up 5% and 4%, respectively, due to the effect of higher market levels and inflows into long-term products, partially offset by asset sales.

| Client assets (in billions) | September 30, | | |
|---|-----------------|-----------------|-----------|
| | 2016 | 2015 | Change |
| Assets by asset class | | | |
| Liquidity | \$ 447 | \$ 463 | (3)% |
| Fixed income | 393 | 351 | 12 |
| Equity | 357 | 336 | 6 |
| Multi-asset and alternatives | 575 | 561 | 2 |
| Total assets under management | 1,772 | 1,711 | 4 |
| Custody/brokerage/administration/deposits | 675 | 612 | 10 |
| Total client assets | \$ 2,447 | \$ 2,323 | 5 |
| Memo: | | | |
| Alternatives client assets ^(a) | \$ 157 | \$ 172 | (9) |
| Assets by client segment | | | |
| Private Banking | \$ 433 | \$ 438 | (1) |
| Institutional | 862 | 816 | 6 |
| Retail | 477 | 457 | 4 |
| Total assets under management | \$ 1,772 | \$ 1,711 | 4 |
| Private Banking | \$ 1,089 | \$ 1,037 | 5 |
| Institutional | 879 | 823 | 7 |
| Retail | 479 | 463 | 3 |
| Total client assets | \$ 2,447 | \$ 2,323 | 5% |

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

| Client assets (continued) (in billions) | Three months ended September 30, | | Nine months ended September 30, | |
|--|-------------------------------------|-----------------|------------------------------------|-----------------|
| | 2016 | 2015 | 2016 | 2015 |
| Assets under management rollforward | | | | |
| Beginning balance | \$ 1,693 | \$ 1,781 | \$ 1,723 | \$ 1,744 |
| Net asset flows: | | | | |
| Liquidity | 22 | (5) | (1) | — |
| Fixed income | 5 | (5) | 26 | — |
| Equity | (7) | (5) | (17) | (2) |
| Multi-asset and alternatives | 21 | 6 | 25 | 27 |
| Market/performance/other impacts | 38 | (61) | 16 | (58) |
| Ending balance, September 30 | \$ 1,772 | \$ 1,711 | \$ 1,772 | \$ 1,711 |
| Client assets rollforward | | | | |
| Beginning balance | \$ 2,344 | \$ 2,423 | \$ 2,350 | \$ 2,387 |
| Net asset flows | 47 | (7) | 42 | 26 |
| Market/performance/other impacts | 56 | (93) | 55 | (90) |
| Ending balance, September 30 | \$ 2,447 | \$ 2,323 | \$ 2,447 | \$ 2,323 |

International metrics

| (in billions, except where otherwise noted) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|--|---|-----------------|-----------|--|-----------------|------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Total net revenue | | | | | | |
| (in millions) ^(a) | | | | | | |
| Europe/Middle East/Africa | \$ 475 | \$ 473 | —% | \$ 1,369 | \$ 1,468 | (7)% |
| Asia/Pacific | 280 | 267 | 5 | 802 | 855 | (6) |
| Latin America/Caribbean | 181 | 182 | (1) | 539 | 590 | (9) |
| Total international net revenue | 936 | 922 | 2 | 2,710 | 2,913 | (7) |
| North America | 2,111 | 1,972 | 7 | 6,248 | 6,161 | 1 |
| Total net revenue | \$ 3,047 | \$ 2,894 | 5 | \$ 8,958 | \$ 9,074 | (1) |
| Assets under management | | | | | | |
| Europe/Middle East/Africa | \$ 314 | \$ 292 | 8 | \$ 314 | \$ 292 | 8 |
| Asia/Pacific | 131 | 119 | 10 | 131 | 119 | 10 |
| Latin America/Caribbean | 45 | 44 | 2 | 45 | 44 | 2 |
| Total international assets under management | 490 | 455 | 8 | 490 | 455 | 8 |
| North America | 1,282 | 1,256 | 2 | 1,282 | 1,256 | 2 |
| Total assets under management | \$ 1,772 | \$ 1,711 | 4 | \$ 1,772 | \$ 1,711 | 4 |
| Client assets | | | | | | |
| Europe/Middle East/Africa | \$ 364 | \$ 341 | 7 | \$ 364 | \$ 341 | 7 |
| Asia/Pacific | 186 | 168 | 11 | 186 | 168 | 11 |
| Latin America/Caribbean | 116 | 108 | 7 | 116 | 108 | 7 |
| Total international client assets | 666 | 617 | 8 | 666 | 617 | 8 |
| North America | 1,781 | 1,706 | 4 | 1,781 | 1,706 | 4 |
| Total client assets | \$ 2,447 | \$ 2,323 | 5% | \$ 2,447 | \$ 2,323 | 5% |

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

CORPORATE

For a discussion of Corporate, see pages 105-106 of JPMorgan Chase's 2015 Annual Report.

Selected income statement data

| (in millions, except headcount) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|--|---|-----------------|--------------|--|-----------------|-------------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Revenue | | | | | | |
| Principal transactions | \$ 57 | \$ (70) | NM | \$ 183 | \$ 97 | 89% |
| Securities gains | 64 | 25 | 156 | 135 | 118 | 14 |
| All other income/(loss) | 76 | 118 | (36) | 319 | (2) | NM |
| Noninterest revenue | 197 | 73 | 170 | 637 | 213 | 199 |
| Net interest income | (385) | (123) | (213) | (927) | (597) | (55) |
| Total net revenue^(a) | (188) | (50) | (276) | (290) | (384) | 24 |
| Provision for credit losses | (1) | (4) | 75 | (4) | (8) | 50 |
| Noninterest expense^(b) | 143 | 172 | (17) | 23 | 368 | (94) |
| Income/(loss) before income tax expense/(benefit) | (330) | (218) | (51) | (309) | (744) | 58 |
| Income tax expense/(benefit) | (165) | (1,935) | 91 | 54 | (2,959) | NM |
| Net income/(loss) | \$ (165) | \$ 1,717 | NM | \$ (363) | \$ 2,215 | NM |
| Total net revenue | | | | | | |
| Treasury and CIO | (211) | (89) | (137) | (531) | (630) | 16 |
| Other Corporate | 23 | 39 | (41) | 241 | 246 | (2) |
| Total net revenue | \$ (188) | \$ (50) | (276) | \$ (290) | \$ (384) | 24 |
| Net income/(loss) | | | | | | |
| Treasury and CIO | (208) | (40) | (420) | (518) | (373) | (39) |
| Other Corporate | 43 | 1,757 | (98) | 155 | 2,588 | (94) |
| Total net income/(loss) | \$ (165) | \$ 1,717 | NM | \$ (363) | \$ 2,215 | NM |
| Selected balance sheet data (period-end) | | | | | | |
| Total assets | \$ 824,336 | \$ 798,680 | 3 | \$ 824,336 | \$ 798,680 | 3 |
| Loans | 1,738 | 2,332 | (25) | 1,738 | 2,332 | (25) |
| Core loans ^(c) | 1,735 | 2,327 | (25) | 1,735 | 2,327 | (25) |
| Headcount | 31,572 | 29,307 | 8 | 31,572 | 29,307 | 8 |

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of \$218 million and \$215 million for the three months ended September 30, 2016 and 2015, respectively, and \$663 million and \$620 million for the nine months ended September 30, 2016 and 2015, respectively.

(b) Included legal expense/(benefit) of \$(85) million and \$102 million for the three months ended September 30, 2016 and 2015, respectively, and \$(550) million and \$425 million for the nine months ended September 30, 2016 and 2015, respectively.

(c) Average core loans were \$1.8 billion and \$2.4 billion for the three months ended September 30, 2016 and 2015, respectively, and \$1.9 billion and \$2.6 billion for the nine months ended September 30, 2016 and 2015, respectively.

Quarterly results

Net loss was \$165 million, compared with net income of \$1.7 billion in the prior year, which was primarily driven by tax benefits of \$1.9 billion related to the resolution of tax audits in the prior-year quarter. Net revenue was a loss of \$188 million, compared to a loss of \$50 million in the prior year. Noninterest expense was \$143 million, down \$29 million.

Year-to-date results

Net loss was \$363 million, compared with net income of \$2.2 billion in the prior year, which was primarily driven by tax benefits of \$2.4 billion related to the resolution of tax audits in the prior year. Net revenue was a loss of \$290 million, compared to a loss of \$384 million in the prior year, which included a \$173 million pre-tax loss in Treasury & Chief Investment Office ("CIO"), primarily related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operational deposits. Noninterest expense was \$23 million, a decrease of \$345 million, due to a net legal benefit in the current year partially offset by higher compensation expense.

Treasury and CIO overview

For a discussion of Treasury and CIO, see page 106 of the Firm's 2015 Annual Report.

At September 30, 2016, 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). During the second quarter of 2016, the Firm transferred commercial MBS and obligations of U.S. states and municipalities with a fair value of \$7.5 billion from available-for-sale ("AFS") to held-to-maturity

("HTM"). These securities were transferred at fair value. The transfers reflect the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI.

See Note 11 for further information on the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 74-78. For information on interest rate, foreign exchange and other risks, see Market Risk Management on pages 60-65.

Selected income statement and balance sheet data

| (in millions) | As of or for the three months ended September 30, | | | As of or for the nine months ended September 30, | | |
|---|---|---------|--------|--|---------|--------|
| | 2016 | 2015 | Change | 2016 | 2015 | Change |
| Securities gains | \$ 64 | \$ 25 | 156% | \$ 135 | \$ 118 | 14% |
| Investment securities portfolio (average) ^(a) | 271,816 | 306,370 | (11) | 278,051 | 320,905 | (13) |
| Investment securities portfolio (period-end) ^(b) | 269,207 | 303,057 | (11) | 269,207 | 303,057 | (11) |
| Mortgage loans (average) | 1,722 | 2,400 | (28) | 1,861 | 2,595 | (28) |
| Mortgage loans (period-end) | 1,661 | 2,293 | (28) | 1,661 | 2,293 | (28) |

(a) Average investment securities included HTM balances of \$52.8 billion and \$50.7 billion for the three months ended September 30, 2016 and 2015, respectively, and \$51.5 billion and \$50.2 billion for the nine months ended September 30, 2016 and 2015, respectively.

(b) Period-end investment securities included HTM balances of \$52.0 billion and \$50.2 billion at September 30, 2016 and 2015, respectively.

Private equity portfolio information^(a)

| (in millions) | September 30, 2016 | December 31, 2015 | Change |
|----------------|--------------------|-------------------|--------|
| Carrying value | \$ 1,893 | \$ 2,103 | (10)% |
| Cost | 2,951 | 3,798 | (22) |

(a) For more information on the Firm's methodologies regarding the valuation of the private equity portfolio, see Note 3 of JPMorgan Chase's 2015 Annual Report.

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 risk areas, such as credit, market, liquidity, model, structural interest rate, principal, country, operational, compliance, 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 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") and other senior executives, is responsible for developing and executing the Firm's risk management

framework. The framework is intended to provide controls and ongoing management of key risks inherent in the Firm's business activities and create a culture of transparency, awareness and personal responsibility through reporting, collaboration, discussion, escalation and sharing of information. 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 Firm is also engaged in a number of activities focused on conduct risk and in regularly evaluating its culture with respect to its business principles.

Effective September 2016, the Firm has aligned the Compliance and Risk Management functions. As a result of this realignment, the Firm's Chief Compliance Officer now reports to the Firm's CRO. Together, Compliance and Risk provide the second line of defense for the Firm. For further information on Risk Governance and Compliance Risk Management, refer to pages 108 and 147, respectively, of JPMorgan Chase's 2015 Annual Report.

The following provides an index of key risk management disclosures. For further information on these disclosures, refer to the page references noted below in both this Form 10-Q and JPMorgan Chase's 2015 Annual Report.

| Risk disclosure | Form 10-Q page reference | Annual Report page reference |
|--|--------------------------|------------------------------|
| Enterprise-Wide Risk Management | 41-78 | 107-164 |
| Risk governance | | 108-111 |
| Credit Risk Management | 43-59 | 112-132 |
| Credit Portfolio | | 114 |
| Consumer Credit Portfolio | 44-49 | 115-121 |
| Wholesale Credit Portfolio | 50-56 | 122-129 |
| Allowance For Credit Losses | 57-59 | 130-132 |
| Market Risk Management | 60-65 | 133-139 |
| Risk identification and classification | | 133 |
| Value-at-risk ("VaR") | 61-63 | 135-137 |
| Economic-value stress testing | | 137-138 |
| Earnings-at-risk | 64 | 138-139 |
| Other sensitivity-based measures | 65 | |
| Country Risk Management | 66 | 140-141 |
| Model Risk Management | | 142 |
| Principal Risk Management | | 143 |
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| Business and technology resiliency | | 145-146 |
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| Capital Management | 67-73 | 149-158 |
| Liquidity Risk Management | 74-78 | 159-164 |
| HQLA | 74 | 160 |
| Funding | 75-77 | 160-163 |
| Credit ratings | 77-78 | 164 |

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 112–132 of JPMorgan Chase's 2015 Annual Report.

In the following tables, reported 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 noninterest revenue); and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans, see Notes 3 and 4. For additional information on the Firm's loans, lending-related commitments and derivative receivables, including the Firm's accounting policies, see Notes 13, 21, and 5, 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 52–54; for information regarding the credit risk inherent in the Firm's investment securities portfolio, see Note 11 of this Form 10-Q, and Note 12 of JPMorgan Chase's 2015 Annual Report; and for information regarding the credit risk inherent in the securities financing portfolio, see Note 12 of this Form 10-Q, and Note 13 of JPMorgan Chase's 2015 Annual Report.

Total credit portfolio

| (in millions) | Credit exposure | | Nonperforming ^{(b)(c)} | |
|--|---------------------|---------------------|---------------------------------|-----------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Loans retained | \$ 883,193 | \$ 832,792 | \$ 7,059 | \$ 6,303 |
| Loans held-for-sale | 2,950 | 1,646 | 72 | 101 |
| Loans at fair value | 1,911 | 2,861 | 7 | 25 |
| Total loans – reported | 888,054 | 837,299 | 7,138 | 6,429 |
| Derivative receivables | 65,579 | 59,677 | 232 | 204 |
| Receivables from customers and other | 19,163 | 13,497 | – | – |
| Total credit-related assets | 972,796 | 910,473 | 7,370 | 6,633 |
| Assets acquired in loan satisfactions | | | | |
| Real estate owned | NA | NA | 354 | 347 |
| Other | NA | NA | 55 | 54 |
| Total assets acquired in loan satisfactions | NA | NA | 409 | 401 |
| Total assets | 972,796 | 910,473 | 7,779 | 7,034 |
| Lending-related commitments | 978,611 | 940,395 | 503 | 193 |
| Total credit portfolio | \$ 1,951,407 | \$ 1,850,868 | \$ 8,282 | \$ 7,227 |
| Credit derivatives used in credit portfolio management activities ^(a) | \$ (23,430) | \$ (20,681) | \$ – | \$ (9) |
| Liquid securities and other cash collateral held against derivatives | (21,212) | (16,580) | NA | NA |

| (in millions, except ratios) | Three months ended September 30, | | Nine months ended September 30, | |
|---|----------------------------------|---------|---------------------------------|----------|
| | 2016 | 2015 | 2016 | 2015 |
| Net charge-offs | \$ 1,121 | \$ 963 | \$ 3,412 | \$ 3,022 |
| Average retained loans | | | | |
| Loans – reported | 869,676 | 787,678 | 853,973 | 767,952 |
| Loans – reported, excluding residential real estate PCI loans | 831,956 | 744,692 | 814,923 | 723,475 |
| Net charge-off rates | | | | |
| Loans – reported | 0.51% | 0.49% | 0.53% | 0.53% |
| Loans – reported, excluding PCI | 0.54 | 0.51 | 0.56 | 0.56 |

- (a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 56 and Note 5.
- (b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
- (c) At September 30, 2016, and December 31, 2015, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$5.0 billion and \$6.3 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of \$259 million and \$290 million, respectively, that are 90 or more days past due; and (3) real estate owned ("REO") insured by U.S. government agencies of \$163 million and \$343 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").

CONSUMER CREDIT PORTFOLIO

The Firm's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans and student 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 13 of this Form 10-Q and Consumer Credit Portfolio on pages 115-121 and Note 14 of JPMorgan Chase's 2015 Annual Report. For further information on lending-related commitments, see note 21 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 AM, and prime mortgage loans held by Corporate.

Consumer credit portfolio

| (in millions, except ratios) | Credit exposure | | Nonaccrual loans ^{(b)(i)} | | Three months ended September 30, | | | | Nine months ended September 30, | | | |
|---|--------------------|--------------------|------------------------------------|-----------------|--|---------------|--|--------------|--|-----------------|--|--------------|
| | | | | | Net charge-offs/ (recoveries) ^(j) | | Average annual net charge-off/ (recovery) rate ^{(i)(k)} | | Net charge-offs/ (recoveries) ^(j) | | Average annual net charge-off/ (recovery) rate ^{(i)(k)} | |
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Consumer, excluding credit card | | | | | | | | | | | | |
| Loans, excluding PCI loans and loans held-for-sale | | | | | | | | | | | | |
| Home equity | \$ 40,740 | \$ 45,559 | \$ 1,904 | \$ 2,191 | \$ 45 | \$ 83 | 0.43% | 0.69% | \$ 140 | \$ 245 | 0.43% | 0.66% |
| Residential mortgage | 189,558 | 166,239 | 2,295 | 2,503 | 7 | (44) | 0.01 | (0.12) | 10 | (17) | 0.01 | (0.02) |
| Auto ^(a) | 64,512 | 60,255 | 212 | 116 | 79 | 57 | 0.49 | 0.40 | 192 | 140 | 0.41 | 0.34 |
| Business banking ^(b) | 22,292 | 21,208 | 286 | 263 | 71 | 50 | 1.28 | 0.96 | 180 | 177 | 1.11 | 1.16 |
| Student and other | 9,251 | 10,096 | 211 | 242 | 34 | 56 | 1.44 | 2.12 | 101 | 147 | 1.40 | 1.84 |
| Total loans, excluding PCI loans and loans held-for-sale | 326,353 | 303,357 | 4,908 | 5,315 | 236 | 202 | 0.29 | 0.29 | 623 | 692 | 0.26 | 0.35 |
| Loans - PCI | | | | | | | | | | | | |
| Home equity | 13,448 | 14,989 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Prime mortgage | 7,919 | 8,893 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Subprime mortgage | 3,021 | 3,263 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Option ARMs ^(c) | 12,657 | 13,853 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total loans - PCI | 37,045 | 40,998 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total loans - retained | 363,398 | 344,355 | 4,908 | 5,315 | 236 | 202 | 0.26 | 0.25 | 623 | 692 | 0.23 | 0.30 |
| Loans held-for-sale | 398 ^(g) | 466 ^(g) | 53 | 98 | — | — | — | — | — | — | — | — |
| Total consumer, excluding credit card loans | 363,796 | 344,821 | 4,961 | 5,413 | 236 | 202 | 0.26 | 0.25 | 623 | 692 | 0.23 | 0.30 |
| Lending-related commitments ^(d) | 59,990 | 58,478 | | | | | | | | | | |
| Receivables from customers ^(e) | 125 | 125 | | | | | | | | | | |
| Total consumer exposure, excluding credit card | 423,911 | 403,424 | | | | | | | | | | |
| Credit card | | | | | | | | | | | | |
| Loans retained ^(f) | 133,346 | 131,387 | — | — | 838 | 759 | 2.51 | 2.41 | 2,528 | 2,348 | 2.61 | 2.54 |
| Loans held-for-sale | 89 | 76 | — | — | — | — | — | — | — | — | — | — |
| Total credit card loans | 133,435 | 131,463 | — | — | 838 | 759 | 2.51 | 2.41 | 2,528 | 2,348 | 2.61 | 2.54 |
| Lending-related commitments ^(d) | 549,634 | 515,518 | | | | | | | | | | |
| Total credit card exposure | 683,069 | 646,981 | | | | | | | | | | |
| Total consumer credit portfolio | \$1,106,980 | \$1,050,405 | \$ 4,961 | \$ 5,413 | \$ 1,074 | \$ 961 | 0.86% | 0.85% | \$ 3,151 | \$ 3,040 | 0.87% | 0.93% |
| Memo: Total consumer credit portfolio, excluding PCI | \$1,069,935 | \$1,009,407 | \$ 4,961 | \$ 5,413 | \$ 1,074 | \$ 961 | 0.93% | 0.94% | \$ 3,151 | \$ 3,040 | 0.94% | 1.04% |

(a) At September 30, 2016, and December 31, 2015, excluded operating lease assets of \$12.1 billion and \$9.2 billion, respectively.

(b) Predominantly includes Business Banking loans as well as deposit overdrafts.

(c) At September 30, 2016, and December 31, 2015, approximately 66% and 64% of the PCI option adjustable rate mortgage ("ARMs") portfolio has been modified into fixed-rate, fully amortizing loans, respectively.

(d) 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.

(e) Receivables from customers represent margin loans to retail brokerage customers, and are included in accrued interest and accounts receivable on the Consolidated balance sheets.

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

(g) Predominantly represents prime mortgage loans held-for-sale.

(h) At September 30, 2016, and December 31, 2015, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of \$5.0 billion and \$6.3 billion, respectively; and (2) student loans insured by U.S. government agencies under the FFELP of \$259 million and \$290 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the FFIEC.

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

(j) Net charge-offs and the net charge-off rates excluded write-offs in the PCI portfolio of \$36 million and \$52 million for the three months ended September 30, 2016 and 2015 respectively, and \$124 million and \$162 million for the nine months ended September 30, 2016 and 2015, respectively. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 57-59 for further details.

(k) Average consumer loans held-for-sale were \$337 million and \$2.1 billion for the three months ended September 30, 2016 and 2015, respectively, and \$372 million and \$2.4 billion for the nine months ended September 30, 2016 and 2015, respectively. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased during the nine months ended September 30, 2016, predominantly due to originations of high-quality prime mortgage and auto loans that have been retained on the balance sheet, partially offset by paydowns and the charge-off or liquidation of delinquent loans. The credit environment remained favorable as the economy strengthened and home prices increased.

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 13.

Home equity: The home equity portfolio declined from the 2015 year-end primarily reflecting loan paydowns and charge-offs. Both early-stage and late-stage delinquencies showed improvement from December 31, 2015. Nonaccrual loans decreased from December 31, 2015 primarily as a result of loss mitigation activities. Net charge-offs for the three and nine months ended September 30, 2016, declined when compared with the same periods of the prior year as a result of improvement in home prices and delinquencies.

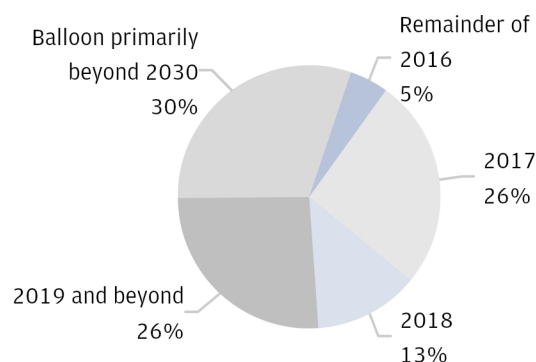
At September 30, 2016, approximately 90% of the Firm's home equity portfolio consists of home equity lines of credit ("HELOCs") and the remainder consists of home equity loans ("HELOANS"). For further information on the Firm's home equity portfolio, see Note 13 of this Form 10-Q and Consumer Credit Portfolio on pages 115-121 of JPMorgan Chase's 2015 Annual Report.

The unpaid principal balance of HELOCs outstanding was \$37 billion at September 30, 2016. Of such amounts, approximately:

- \$14 billion have recast from interest-only to fully amortizing payments or have been modified,
- \$16 billion are scheduled to recast from interest-only to fully amortizing payments in future periods, and
- \$7 billion are interest-only balloon HELOCs, which primarily mature after 2030.

The following chart illustrates the payment recast composition of the approximately \$23 billion of HELOCs scheduled to recast in the future, based upon their current contractual terms.

**HELOCs scheduled to recast
(at September 30, 2016)**



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 unpaid principal balance 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 September 30, 2016, the Firm estimated that the unpaid principal balance of its home equity portfolio contained approximately \$1.2 billion of current junior lien loans that were considered high risk seconds, compared with \$1.4 billion at December 31, 2015. 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 13.

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, 2015 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, 2015. Nonaccrual loans decreased from December 31, 2015 primarily as a result of loss mitigation activities. Net charge-offs for the three and nine months ended September 30, 2016 remain low, reflecting continued improvement in home prices and delinquencies.

At September 30, 2016, and December 31, 2015, the Firm's residential mortgage portfolio, including loans held-for-sale, included \$9.9 billion and \$11.1 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which \$7.0 billion and \$8.4 billion, respectively, were 30 days or more past due (of these past due loans, \$5.0 billion and \$6.3 billion, respectively, were 90 days or more past due). The Firm monitors its exposure to any potential unrecoverable claim payments related to government insured loans and considers this exposure in estimating the allowance for loan losses. The financial impact related to exposure for future claims of government guaranteed loans is not expected to be significant.

At September 30, 2016, and December 31, 2015, the Firm's residential mortgage portfolio included \$18.3 billion and \$17.8 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 increased compared with December 31, 2015 due to growth in new originations. Nonaccrual loans increased compared with December 31, 2015. Net charge-offs for the three and nine months ended September 30, 2016 increased compared with the same periods of the prior year as a result of higher retail auto loan balances and a moderate increase in loss severity. The auto loan portfolio predominantly consists of prime-quality credits.

Business banking: Business banking loans increased compared with December 31, 2015 due to growth in loan originations. Nonaccrual loans increased compared with December 31, 2015. Net charge-offs for the three and nine months ended September 30, 2016 increased from prior year.

Student and other: Student and other loans decreased from December 31, 2015, due primarily to the run-off of the student loan portfolio as the Firm ceased originations of student loans during the fourth quarter of 2013. Nonaccrual loans declined from December 31, 2015 and net charge-offs for the three and nine months ended September 30, 2016 declined from prior year as a result of the run-off of the student loan portfolio.

Purchased credit-impaired loans: PCI loans decreased as the portfolio continues to run off. As of September 30, 2016, approximately 12% of the option ARM PCI loans were delinquent and approximately 66% of the portfolio has 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) | | LTD liquidation losses ^(b) | |
|-------------------|--|----------------|---------------------------------------|----------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Home equity | \$ 14.7 | \$ 14.5 | \$ 12.8 | \$ 12.7 |
| Prime mortgage | 4.0 | 4.0 | 3.7 | 3.7 |
| Subprime mortgage | 3.2 | 3.3 | 3.0 | 3.0 |
| Option ARMs | 10.0 | 10.0 | 9.7 | 9.5 |
| Total | \$ 31.9 | \$ 31.8 | \$ 29.2 | \$ 28.9 |

(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 \$1.2 billion and \$1.5 billion at September 30, 2016, and December 31, 2015, respectively.

(b) Life-to-date ("LTD") liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification.

Current estimated LTVs of residential real estate loans

The current estimated average loan-to-value ("LTV") ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 58% at September 30, 2016, compared with 59% at December 31, 2015. The current estimated average LTV ratio for residential real estate PCI loans, based on the unpaid principal balances, was 65% at September 30, 2016, compared with 69% at December 31, 2015.

Average LTV ratios have declined consistent with recent improvements in home prices. For further information on current estimated LTVs on residential real estate loans, see Note 13.

Geographic composition of residential real estate loans

For information on the geographic composition of the Firm's residential real estate loans, see Note 13.

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, 2015. For further information on the Firm's cumulative redefault rates see Consumer Credit Portfolio on pages 115–121 of JPMorgan Chase's 2015 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 September 30, 2016, the carrying value of non-PCI loans and the unpaid principal balance of PCI loans modified in step-rate modifications were \$3 billion and \$9 billion, respectively. The Firm continues to monitor this risk exposure and the impact of these potential interest rate increases is considered in the Firm's allowance for loan losses.

The following table presents information as of September 30, 2016, and December 31, 2015, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. For further information on modifications for the three and nine months ended September 30, 2016 and 2015, see Note 13.

Modified residential real estate loans

| (in millions) | September 30, 2016 | | December 31, 2015 | |
|---|--------------------|---|-------------------|---|
| | 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 | \$ 2,253 | \$ 1,088 | \$ 2,358 | \$ 1,220 |
| Residential mortgage | 6,214 | 1,799 | 6,690 | 1,957 |
| Total modified residential real estate loans, excluding PCI loans | \$ 8,467 | \$ 2,887 | \$ 9,048 | \$ 3,177 |
| Modified PCI loans^(c) | | | | |
| Home equity | \$ 2,458 | NA | \$ 2,526 | NA |
| Prime mortgage | 5,209 | NA | 5,686 | NA |
| Subprime mortgage | 3,022 | NA | 3,242 | NA |
| Option ARMs | 9,593 | NA | 10,427 | NA |
| Total modified PCI loans | \$ 20,282 | NA | \$ 21,881 | NA |

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

(b) At September 30, 2016, and December 31, 2015, \$3.6 billion and \$3.8 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 15.

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

(d) As of September 30, 2016, and December 31, 2015, nonaccrual loans included \$2.3 billion and \$2.5 billion, respectively, 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 13.

Nonperforming assets

The following table presents information as of September 30, 2016, and December 31, 2015, about consumer, excluding credit card, nonperforming assets.

| Nonperforming assets ^(a) | | |
|--|-----------------------|----------------------|
| (in millions) | September 30, 2016 | December 31, 2015 |
| Nonaccrual loans^(b) | | |
| Residential real estate | \$ 4,252 | \$ 4,792 |
| Other consumer | 709 | 621 |
| Total nonaccrual loans | 4,961 | 5,413 |
| Assets acquired in loan satisfactions | | |
| Real estate owned | 279 | 277 |
| Other | 53 | 48 |
| Total assets acquired in loan satisfactions | 332 | 325 |
| Total nonperforming assets | \$ 5,293 | \$ 5,738 |

- (a) At September 30, 2016, and December 31, 2015, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$5.0 billion and \$6.3 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of \$259 million and \$290 million, respectively, that are 90 or more days past due; and (3) REO insured by U.S. government agencies of \$163 million and \$343 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. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Nonaccrual loans in the residential real estate portfolio decreased to \$4.3 billion at September 30, 2016 from \$4.8 billion at December 31, 2015, of which 29% and 31% 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% and 44% to the estimated net realizable value of the collateral at September 30, 2016, and December 31, 2015, respectively.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 13.

Nonaccrual loans: The following table presents changes in consumer, excluding credit card, nonaccrual loans for the nine months ended September 30, 2016 and 2015.

Nonaccrual loans

| Nine months ended September 30, (in millions) | | |
|--|-----------------|-----------------|
| | 2016 | 2015 |
| Beginning balance | \$ 5,413 | \$ 6,509 |
| Additions | 2,804 | 2,714 |
| Reductions: | | |
| Principal payments and other ^(a) | 1,078 | 1,331 |
| Charge-offs | 572 | 614 |
| Returned to performing status | 1,215 | 1,323 |
| Foreclosures and other liquidations | 391 | 425 |
| Total reductions | 3,256 | 3,693 |
| Net additions/(reductions) | (452) | (979) |
| Ending balance | \$ 4,961 | \$ 5,530 |

(a) Other reductions includes loan sales.

Credit card

Total credit card loans increased from December 31, 2015 due to strong new account growth and higher sales volume. The September 30, 2016 30+ day delinquency rate increased to 1.53% from 1.43% at December 31, 2015, but remains near record lows. For the three months ended September 30, 2016 and 2015, the net charge-off rates were 2.51% and 2.41%, respectively. For the nine months ended September 30, 2016 and 2015, the net charge-off rates were 2.61% and 2.54%, 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 are anticipated to generate loss rates higher than the more seasoned portion of the portfolio, given the higher mix of near-prime accounts being originated. These near-prime accounts 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 13.

Modifications of credit card loans

At September 30, 2016, and December 31, 2015, the Firm had \$1.3 billion and \$1.5 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2015, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

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

For additional information about loan modification programs to borrowers, see Note 13.

WHOLESALE CREDIT PORTFOLIO

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

The wholesale credit portfolio, excluding the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios, continued to be generally stable for the nine months ended September 30, 2016, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. See industry discussion on pages 52-54 for further information. Growth in loans retained was driven by increased client activity, notably in Commercial Term Lending and Real Estate Banking within commercial real estate, as well as across multiple commercial and industrial industries. 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; and of industry, product and client concentrations.

Wholesale credit portfolio

| (in millions) | Credit exposure | | Nonperforming ^(c) | |
|--|-------------------|-------------------|------------------------------|-----------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Loans retained | \$ 386,449 | \$ 357,050 | \$ 2,151 | \$ 988 |
| Loans held-for-sale | 2,463 | 1,104 | 19 | 3 |
| Loans at fair value | 1,911 | 2,861 | 7 | 25 |
| Loans - reported | 390,823 | 361,015 | 2,177 | 1,016 |
| Derivative receivables | 65,579 | 59,677 | 232 | 204 |
| Receivables from customers and other ^(a) | 19,038 | 13,372 | — | — |
| Total wholesale credit-related assets | 475,440 | 434,064 | 2,409 | 1,220 |
| Lending-related commitments | 368,987 | 366,399 | 503 | 193 |
| Total wholesale credit exposure | \$ 844,427 | \$ 800,463 | \$ 2,912 | \$ 1,413 |
| Credit derivatives used in credit portfolio management activities ^(b) | \$ (23,430) | \$ (20,681) | \$ — | \$ (9) |
| Liquid securities and other cash collateral held against derivatives | (21,212) | (16,580) | NA | NA |

- (a) Receivables from customers and other include \$19.0 billion and \$13.3 billion of margin loans at September 30, 2016, and December 31, 2015, 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 56, and Note 5.
- (c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of September 30, 2016, and December 31, 2015. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 14 of JPMorgan Chase's 2015 Annual Report.

Wholesale credit exposure – maturity and ratings profile

| September 30, 2016 | Maturity profile ^(e) | | | | Ratings profile | | | |
|--|---------------------------------|----------------------------------|-------------------|-------------------|----------------------|---------------------|-------------------|---------------|
| | Due in 1 year or less | Due after 1 year through 5 years | Due after 5 years | Total | Investment-grade | Noninvestment-grade | Total | Total % of IG |
| | | | | | AAA/Aaa to BBB-/Baa3 | BB+/Ba1 & below | | |
| (in millions, except ratios) | | | | | | | | |
| Loans retained | \$ 122,318 | \$ 163,472 | \$ 100,659 | \$ 386,449 | \$ 290,785 | \$ 95,664 | \$ 386,449 | 75% |
| Derivative receivables | | | | 65,579 | | | 65,579 | |
| Less: Liquid securities and other cash collateral held against derivatives | | | | (21,212) | | | (21,212) | |
| Total derivative receivables, net of all collateral | 11,097 | 10,154 | 23,116 | 44,367 | 35,771 | 8,596 | 44,367 | 81 |
| Lending-related commitments | 86,554 | 274,770 | 7,663 | 368,987 | 270,272 | 98,715 | 368,987 | 73 |
| Subtotal | 219,969 | 448,396 | 131,438 | 799,803 | 596,828 | 202,975 | 799,803 | 75 |
| Loans held-for-sale and loans at fair value ^(a) | | | | 4,374 | | | 4,374 | |
| Receivables from customers and other | | | | 19,038 | | | 19,038 | |
| Total exposure – net of liquid securities and other cash collateral held against derivatives | | | | \$ 823,215 | | | \$ 823,215 | |
| Credit derivatives used in credit portfolio management activities by reference entity ratings profile ^{(b)(c)(d)} | \$ (1,332) | \$ (13,471) | \$ (8,627) | \$ (23,430) | \$ (19,727) | \$ (3,703) | \$ (23,430) | 84% |

| December 31, 2015 | Maturity profile ^(e) | | | | Ratings profile | | | |
|--|---------------------------------|----------------------------------|-------------------|-------------------|----------------------|---------------------|-------------------|---------------|
| | Due in 1 year or less | Due after 1 year through 5 years | Due after 5 years | Total | Investment-grade | Noninvestment-grade | Total | Total % of IG |
| | | | | | AAA/Aaa to BBB-/Baa3 | BB+/Ba1 & below | | |
| (in millions, except ratios) | | | | | | | | |
| Loans retained | \$ 110,348 | \$ 155,902 | \$ 90,800 | \$ 357,050 | \$ 267,736 | \$ 89,314 | \$ 357,050 | 75% |
| Derivative receivables | | | | 59,677 | | | 59,677 | |
| Less: Liquid securities and other cash collateral held against derivatives | | | | (16,580) | | | (16,580) | |
| Total derivative receivables, net of all collateral | 11,399 | 12,836 | 18,862 | 43,097 | 34,773 | 8,324 | 43,097 | 81 |
| Lending-related commitments | 105,514 | 251,042 | 9,843 | 366,399 | 267,922 | 98,477 | 366,399 | 73 |
| Subtotal | 227,261 | 419,780 | 119,505 | 766,546 | 570,431 | 196,115 | 766,546 | 74 |
| Loans held-for-sale and loans at fair value ^(a) | | | | 3,965 | | | 3,965 | |
| Receivables from customers and other | | | | 13,372 | | | 13,372 | |
| Total exposure – net of liquid securities and other cash collateral held against derivatives | | | | \$ 783,883 | | | \$ 783,883 | |
| Credit derivatives used in credit portfolio management activities by reference entity ratings profile ^{(b)(c)(d)} | \$ (808) | \$ (14,427) | \$ (5,446) | \$ (20,681) | \$ (17,754) | \$ (2,927) | \$ (20,681) | 86% |

(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.

(d) 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.

(e) 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 September 30, 2016, 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, paying 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 \$20.3 billion at September 30, 2016, compared with \$14.6 billion at December 31, 2015, driven by downgrades within the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios.

Below are summaries of the Firm's exposures as of September 30, 2016, and December 31, 2015. For additional information on industry concentrations, see Note 5 of JPMorgan Chase's 2015 Annual Report.

Wholesale credit exposure – industries^(a)

| As of or for the Nine months ended September 30, 2016 (in millions) | Credit exposure ^(e) | Investment-grade | Noninvestment-grade | | | Selected metrics | | | | |
|--|--------------------------------|-------------------|---------------------|-----------------------|--------------------------|---|------------------------------|---|---|--|
| | | | 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 | \$ 128,316 | \$ 100,634 | \$ 26,563 | \$ 913 | \$ 206 | \$ 24 | \$ (1) | \$ (54) | \$ (107) | |
| Consumer & Retail | 88,643 | 56,841 | 29,937 | 1,686 | 179 | 25 | 23 | (582) | (61) | |
| Technology, Media & Telecommunications | 59,617 | 33,623 | 24,441 | 1,536 | 17 | 44 | 2 | (901) | (67) | |
| Healthcare | 56,803 | 48,165 | 8,002 | 582 | 54 | 22 | 32 | (246) | (303) | |
| Industrials | 56,059 | 35,340 | 19,545 | 1,081 | 93 | 135 | 3 | (473) | (18) | |
| Banks & Finance Cos | 41,911 | 33,600 | 7,979 | 313 | 19 | 25 | (1) | (1,356) | (5,007) | |
| Oil & Gas | 38,955 | 17,891 | 11,206 | 8,363 | 1,495 | 48 | 149 | (1,460) | (24) | |
| Utilities | 30,764 | 25,280 | 4,819 | 534 | 131 | 2 | – | (273) | (145) | |
| State & Municipal Govt ^(b) | 28,320 | 27,616 | 658 | 6 | 40 | 2 | (1) | (130) | (135) | |
| Asset Managers | 28,302 | 24,324 | 3,978 | – | – | 24 | – | – | (5,133) | |
| Central Govt | 23,754 | 23,351 | 358 | 45 | – | 3 | – | (11,842) | (4,518) | |
| Transportation | 19,380 | 12,379 | 6,584 | 383 | 34 | 8 | 10 | (94) | (205) | |
| Chemicals & Plastics | 17,508 | 12,095 | 5,226 | 157 | 30 | 5 | – | (35) | (3) | |
| Automotive | 15,047 | 9,336 | 5,515 | 195 | 1 | 7 | – | (464) | (6) | |
| Metals & Mining | 13,565 | 5,256 | 6,870 | 1,295 | 144 | 2 | 22 | (639) | (5) | |
| Insurance | 11,085 | 9,463 | 1,504 | – | 118 | 28 | – | (297) | (1,639) | |
| Financial Markets Infrastructure | 10,309 | 8,812 | 1,497 | – | – | – | – | – | (1,646) | |
| Securities Firms | 4,762 | 1,420 | 3,342 | – | – | – | – | (230) | (520) | |
| All other ^(c) | 147,915 | 130,683 | 16,625 | 282 | 325 | 1,007 | 23 | (4,354) | (1,670) | |
| Subtotal | \$ 821,015 | \$ 616,109 | \$ 184,649 | \$ 17,371 | \$ 2,886 | \$ 1,411 | \$ 261 | \$ (23,430) | \$ (21,212) | |
| Loans held-for-sale and loans at fair value | 4,374 | | | | | | | | | |
| Receivables from customers and interests in purchased receivables | 19,038 | | | | | | | | | |
| Total^(d) | \$ 844,427 | | | | | | | | | |

| As of or for the year ended December 31, 2015 (in millions) | Selected metrics | | | | | | | | |
|---|-----------------------------------|----------------------|---------------------|--------------------------|-----------------------------|--|-------------------------------------|---|--|
| | Credit exposure ^(e) | Investment- grade | Noninvestment-grade | | | 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 |
| | | | Noncriticized | Criticized performing | Criticized nonperforming | | | | |
| Real Estate | \$ 116,857 | \$ 88,076 | \$ 27,087 | \$ 1,463 | \$ 231 | \$ 208 | \$ (14) | \$ (54) | \$ (47) |
| Consumer & Retail | 85,460 | 53,647 | 29,659 | 1,947 | 207 | 18 | 13 | (288) | (94) |
| Technology, Media & Telecommunications | 57,382 | 29,205 | 26,925 | 1,208 | 44 | 5 | (1) | (806) | (21) |
| Healthcare | 46,053 | 37,858 | 7,755 | 394 | 46 | 129 | (7) | (24) | (245) |
| Industrials | 54,386 | 36,519 | 16,663 | 1,164 | 40 | 59 | 8 | (386) | (39) |
| Banks & Finance Cos | 43,398 | 35,071 | 7,654 | 610 | 63 | 17 | (5) | (974) | (5,509) |
| Oil & Gas | 42,077 | 24,379 | 13,158 | 4,263 | 277 | 22 | 13 | (530) | (37) |
| Utilities | 30,853 | 24,983 | 5,655 | 168 | 47 | 3 | — | (190) | (289) |
| State & Municipal Govt ^(b) | 29,114 | 28,307 | 745 | 7 | 55 | 55 | (8) | (146) | (81) |
| Asset Managers | 23,815 | 20,214 | 3,570 | 31 | — | 18 | — | (6) | (4,453) |
| Central Govt | 17,968 | 17,871 | 97 | — | — | 7 | — | (9,359) | (2,393) |
| Transportation | 19,227 | 13,258 | 5,801 | 167 | 1 | 15 | 3 | (51) | (243) |
| Chemicals & Plastics | 15,232 | 10,910 | 4,017 | 274 | 31 | 9 | — | (17) | — |
| Automotive | 13,864 | 9,182 | 4,580 | 101 | 1 | 4 | (2) | (487) | (1) |
| Metals & Mining | 14,049 | 6,522 | 6,434 | 1,008 | 85 | 1 | — | (449) | (4) |
| Insurance | 11,889 | 9,812 | 1,958 | 26 | 93 | 23 | — | (157) | (1,410) |
| Financial Markets Infrastructure | 7,973 | 7,304 | 669 | — | — | — | — | — | (167) |
| Securities Firms | 4,412 | 1,505 | 2,907 | — | — | 3 | — | (102) | (256) |
| All other ^(c) | 149,117 | 130,488 | 18,095 | 370 | 164 | 1,015 | 10 | (6,655) | (1,291) |
| Subtotal | \$ 783,126 | \$ 585,111 | \$ 183,429 | \$ 13,201 | \$ 1,385 | \$ 1,611 | \$ 10 | \$ (20,681) | \$ (16,580) |
| Loans held-for-sale and loans at fair value | 3,965 | | | | | | | | |
| Receivables from customers and interests in purchased receivables | 13,372 | | | | | | | | |
| Total^(d) | \$ 800,463 | | | | | | | | |

- (a) The industry rankings presented in the table as of December 31, 2015, are based on the industry rankings of the corresponding exposures at September 30, 2016, not actual rankings of such exposures at December 31, 2015.
- (b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at September 30, 2016, and December 31, 2015, noted above, the Firm held: \$8.3 billion and \$7.6 billion, respectively, of trading securities; \$31.4 billion and \$33.6 billion, respectively, of AFS securities; and \$14.5 billion and \$12.8 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. For further information, see Note 3 and Note 11.
- (c) All other includes: individuals; SPEs; holding companies; and private education and civic organizations, representing approximately 55%, 37%, 4% and 4%, respectively, at September 30, 2016, and 54%, 37%, 5% and 4%, respectively, at December 31, 2015.
- (d) Excludes cash placed with banks of \$409.5 billion and \$351.0 billion, at September 30, 2016, and December 31, 2015, 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 which present actual or potential credit concerns.

Oil & Gas and Natural Gas Pipelines

The following table presents Oil & Gas and Natural Gas Pipeline exposures as of September 30, 2016, and December 31, 2015.

| (in millions, except ratios) | September 30, 2016 | | | | |
|---|---------------------------------------|------------------------|------------------|--------------------|-----------|
| | Loans and Lending-related Commitments | Derivative Receivables | Credit exposure | % Investment-grade | % Drawn |
| Exploration & Production ("E&P") and Oilfield Services ^(a) | \$ 20,527 | \$ 618 | \$ 21,145 | 25% | 39% |
| Other Oil & Gas ^(b) | 17,190 | 620 | 17,810 | 70 | 34 |
| Total Oil & Gas | 37,717 | 1,238 | 38,955 | 46 | 36 |
| Natural Gas Pipelines ^(c) | 4,567 | 178 | 4,745 | 67 | 34 |
| Total Oil & Gas and Natural Gas Pipelines | \$ 42,284 | \$ 1,416 | \$ 43,700 | 48 | 36 |

| (in millions, except ratios) | December 31, 2015 | | | | |
|--|---------------------------------------|------------------------|------------------|--------------------|-----------|
| | Loans and Lending-related Commitments | Derivative Receivables | Credit exposure | % Investment-grade | % Drawn |
| E&P and Oilfield Services ^(a) | \$ 23,055 | \$ 400 | \$ 23,455 | 44% | 36% |
| Other Oil & Gas ^(b) | 17,120 | 1,502 | 18,622 | 76 | 27 |
| Total Oil & Gas | 40,175 | 1,902 | 42,077 | 58 | 32 |
| Natural Gas Pipelines ^(c) | 4,093 | 158 | 4,251 | 64 | 21 |
| Total Oil & Gas and Natural Gas Pipelines | \$ 44,268 | \$ 2,060 | \$ 46,328 | 59 | 31 |

(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.

Exposure to the Oil & Gas and Natural Gas Pipelines portfolios was approximately 5.2% of the Firm's total wholesale exposure as of September 30, 2016 and 5.8% as of December 31, 2015. Exposure to these industries decreased by \$2.6 billion during the nine months ended September 30, 2016 to \$43.7 billion; of the \$43.7 billion, approximately \$15.8 billion was drawn. As of September 30, 2016, approximately \$21.1 billion of the exposure was investment grade, of which \$5.9 billion was drawn, and approximately \$22.6 billion of the exposure was noninvestment-grade, of which \$9.8 billion was drawn; 23% 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 E&P sub-sector of the Oil & Gas industry, was \$14.1 billion as of September 30, 2016; 47% 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 billion as of September 30, 2016. While the overall trends and sentiment have been stabilizing, the Firm continues to actively monitor and manage its exposure to these portfolios. The Firm is also actively monitoring potential contagion effects to other related or dependent industries and geographies; however, to date, the Firm has not observed any material deterioration in these related or dependent industries and geographies in the wholesale portfolio.

Metals & Mining: Exposure to the Metals & Mining industry was approximately 1.6% and 1.8% of the Firm's total wholesale exposure as of September 30, 2016, and December 31, 2015, respectively. Exposure to the Metals & Mining industry decreased by \$484 million during the nine months ended September 30, 2016 to \$13.6 billion, of which \$4.6 billion was drawn. The portfolio largely consisted of exposure in North America, and was concentrated in the Steel and Diversified Mining sub-sectors. Approximately 39% and 46% of the exposure in the Metals & Mining portfolio was investment-grade as of September 30, 2016, and December 31, 2015, respectively.

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. The Firm actively manages its wholesale credit exposure. One way of managing credit risk is through secondary market sales of loans and lending-related commitments. For further discussion on loans, including information on credit quality indicators and sales of loans, see Note 13.

The following table presents the change in the nonaccrual loan portfolio for the nine months ended September 30, 2016 and 2015. Wholesale nonaccrual loans increased primarily driven by downgrades in the Oil & Gas portfolio.

Wholesale nonaccrual loan activity^(a)

Nine months ended September 30,

| (in millions) | 2016 | 2015 |
|-------------------------------|-----------------|-----------------|
| Beginning balance | \$ 1,016 | \$ 624 |
| Additions | 2,520 | 1,142 |
| Reductions: | | |
| Paydowns and other | 701 | 352 |
| Gross charge-offs | 287 | 42 |
| Returned to performing status | 201 | 253 |
| Sales | 170 | 5 |
| Total reductions | 1,359 | 652 |
| Net changes | 1,161 | 490 |
| Ending balance | \$ 2,177 | \$ 1,114 |

(a) Loans are placed on nonaccrual status when management believes full payment of principal or interest is not expected, regardless of delinquency status, or when principal or interest have been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the three and nine months ended September 30, 2016 and 2015. 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 September 30, | | Nine months ended September 30, | |
|--------------------------------|----------------------------------|------------|---------------------------------|------------|
| | 2016 | 2015 | 2016 | 2015 |
| Loans - reported | | | | |
| Average loans retained | \$ 374,593 | \$ 339,172 | \$ 368,225 | \$ 333,038 |
| Gross charge-offs | 63 | 13 | 291 | 46 |
| Gross recoveries | (16) | (11) | (30) | (64) |
| Net charge-offs/(recoveries) | 47 | 2 | 261 | (18) |
| Net charge-off/(recovery) rate | 0.05% | —% | 0.09% | (0.01)% |

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 likely actual future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's wholesale lending-related commitments was \$210.7 billion and \$212.4 billion as of September 30, 2016, and December 31, 2015, 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 5.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

| (in millions) | Derivative receivables | |
|--|------------------------|-------------------|
| | September 30, 2016 | December 31, 2015 |
| Interest rate | \$ 34,599 | \$ 26,363 |
| Credit derivatives | 810 | 1,423 |
| Foreign exchange | 16,838 | 17,177 |
| Equity | 6,859 | 5,529 |
| Commodity | 6,473 | 9,185 |
| Total, net of cash collateral | 65,579 | 59,677 |
| Liquid securities and other cash collateral held against derivative receivables ^(a) | (21,212) | (16,580) |
| Total, net of collateral | \$ 44,367 | \$ 43,097 |

(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 \$65.6 billion and \$59.7 billion at September 30, 2016, and December 31, 2015, 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 \$21.2 billion and \$16.6 billion at September 30, 2016, and December 31, 2015, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor. The increase in derivative receivables at September 30, 2016 from December 31, 2015, was predominantly related to client-driven market-making activities in CIB. The increase in derivative receivables reflected the impact of market movements, which increased interest rate receivables.

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 5.

The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities 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)

| | September 30, 2016 | | December 31, 2015 | |
|------------------------|----------------------------|---------------------------------|----------------------------|---------------------------------|
| | Exposure net of collateral | % of exposure net of collateral | Exposure net of collateral | % of exposure net of collateral |
| AAA/Aaa to AA-/Aa3 | \$ 10,639 | 24% | \$ 10,371 | 24% |
| A+/A1 to A-/A3 | 8,936 | 20 | 10,595 | 25 |
| BBB+/Baa1 to BBB-/Baa3 | 16,196 | 37 | 13,807 | 32 |
| BB+/Ba1 to B-/B3 | 7,635 | 17 | 7,500 | 17 |
| CCC+/Caa1 and below | 961 | 2 | 824 | 2 |
| Total | \$ 44,367 | 100% | \$ 43,097 | 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 87% at both September 30, 2016 and December 31, 2015.

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. For a detailed description of credit derivatives, see Credit derivatives in Note 5 of this Form 10-Q, and Note 6 of JPMorgan Chase's 2015 Annual Report.

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. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 5 of this Form 10-Q, and Note 6 of JPMorgan Chase's 2015 Annual Report.

Credit derivatives used in credit portfolio management activities

| (in millions) | Notional amount of protection purchased and sold ^(a) | |
|--|---|-------------------|
| | September 30, 2016 | December 31, 2015 |
| Credit derivatives used to manage: | | |
| Loans and lending-related commitments | \$ 2,809 | \$ 2,289 |
| Derivative receivables | 20,621 | 18,392 |
| Credit derivatives used in credit portfolio management activities | \$ 23,430 | \$ 20,681 |

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance 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 80-81 and Note 14 of this Form 10-Q, and Critical Accounting Estimates Used by the Firm on pages 165-169 and Note 15 of JPMorgan Chase's 2015 Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the CRO, the Chief Financial Officer and the Controller of the Firm, and discussed with the Board of Directors Risk Policy Committee and the Audit Committee of the Board of Directors. As of September 30, 2016, 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 increased from December 31, 2015, reflecting loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio; these were partially offset by reductions in the allowance for loan losses in the residential real estate portfolio due to continued improvement in home prices and delinquencies, as well as runoff in the student loan portfolio. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 44-49 and Note 13.

The wholesale allowance for credit losses increased from December 31, 2015, reflecting the impact of downgrades in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios. Excluding these portfolios, the wholesale portfolio continued to experience generally stable credit quality trends and low charge-off rates.

Summary of changes in the allowance for credit losses

| Nine months ended September 30, (in millions, except ratios) | 2016 | | | | 2015 | | | |
|--|---------------------------------------|-----------------|-----------------|------------------|---------------------------------------|-----------------|-----------------|------------------|
| | 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, | \$ 5,806 | \$ 3,434 | \$ 4,315 | \$ 13,555 | \$ 7,050 | \$ 3,439 | \$ 3,696 | \$ 14,185 |
| Gross charge-offs | 1,071 | 2,803 | 291 | 4,165 | 1,269 | 2,626 | 46 | 3,941 |
| Gross recoveries | (448) | (275) | (30) | (753) | (577) | (278) | (64) | (919) |
| Net charge-offs/(recoveries) | 623 | 2,528 | 261 | 3,412 | 692 | 2,348 | (18) | 3,022 |
| Write-offs of PCI loans ^(a) | 124 | — | — | 124 | 162 | — | — | 162 |
| Provision for loan losses | 578 | 2,978 | 628 | 4,184 | (346) | 2,348 | 461 | 2,463 |
| Other | — | — | 1 | 1 | (1) | (5) | 8 | 2 |
| Ending balance at September 30, | \$ 5,637 | \$ 3,884 | \$ 4,683 | \$ 14,204 | \$ 5,849 | \$ 3,434 | \$ 4,183 | \$ 13,466 |
| Impairment methodology | | | | | | | | |
| Asset-specific ^(b) | \$ 352 | \$ 363 | \$ 490 | \$ 1,205 | \$ 359 | \$ 485 | \$ 281 | \$ 1,125 |
| Formula-based | 2,667 | 3,521 | 4,193 | 10,381 | 2,702 | 2,949 | 3,902 | 9,553 |
| PCI | 2,618 | — | — | 2,618 | 2,788 | — | — | 2,788 |
| Total allowance for loan losses | \$ 5,637 | \$ 3,884 | \$ 4,683 | \$ 14,204 | \$ 5,849 | \$ 3,434 | \$ 4,183 | \$ 13,466 |
| Allowance for lending-related commitments | | | | | | | | |
| Beginning balance at January 1, | \$ 14 | \$ — | \$ 772 | \$ 786 | \$ 13 | \$ — | \$ 609 | \$ 622 |
| Provision for lending-related commitments | — | — | 313 | 313 | 1 | — | 112 | 113 |
| Other | — | — | 1 | 1 | — | — | — | — |
| Ending balance at September 30, | \$ 14 | \$ — | \$ 1,086 | \$ 1,100 | \$ 14 | \$ — | \$ 721 | \$ 735 |
| Impairment methodology | | | | | | | | |
| Asset-specific | \$ — | \$ — | \$ 162 | \$ 162 | \$ — | \$ — | \$ 69 | \$ 69 |
| Formula-based | 14 | — | 924 | 938 | 14 | — | 652 | 666 |
| Total allowance for lending-related commitments^(c) | \$ 14 | \$ — | \$ 1,086 | \$ 1,100 | \$ 14 | \$ — | \$ 721 | \$ 735 |
| Total allowance for credit losses | \$ 5,651 | \$ 3,884 | \$ 5,769 | \$ 15,304 | \$ 5,863 | \$ 3,434 | \$ 4,904 | \$ 14,201 |
| Memo: | | | | | | | | |
| Retained loans, end of period | \$363,398 | \$133,346 | \$ 386,449 | \$883,193 | \$331,732 | \$125,634 | \$346,927 | \$804,293 |
| Retained loans, average | 356,347 | 129,401 | 368,225 | 853,973 | 311,527 | 123,387 | 333,038 | 767,952 |
| PCI loans, end of period | 37,045 | — | 3 | 37,048 | 42,236 | — | 4 | 42,240 |
| Credit ratios | | | | | | | | |
| Allowance for loan losses to retained loans | 1.55% | 2.91% | 1.21% | 1.61% | 1.76% | 2.73% | 1.21 % | 1.67% |
| Allowance for loan losses to retained nonaccrual loans ^(d) | 115 | NM | 218 | 201 | 106 | NM | 385 | 204 |
| Allowance for loan losses to retained nonaccrual loans excluding credit card | 115 | NM | 218 | 146 | 106 | NM | 385 | 152 |
| Net charge-off/(recovery) rates | 0.23 | 2.61 | 0.09 | 0.53 | 0.30 | 2.54 | (0.01) | 0.53 |
| Credit ratios, excluding residential real estate PCI loans | | | | | | | | |
| Allowance for loan losses to retained loans | 0.93 | 2.91 | 1.21 | 1.37 | 1.06 | 2.73 | 1.21 | 1.40 |
| Allowance for loan losses to retained nonaccrual loans ^(d) | 62 | NM | 218 | 164 | 55 | NM | 385 | 161 |
| Allowance for loan losses to retained nonaccrual loans excluding credit card | 62 | NM | 218 | 109 | 55 | NM | 385 | 109 |
| Net charge-off/(recovery) rates | 0.26% | 2.61% | 0.09% | 0.56% | 0.35% | 2.54% | (0.01)% | 0.56% |

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

- 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).
- 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.
- The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.
- 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 and nine months ended September 30, 2016, the provision for credit losses was \$1.3 billion and \$4.5 billion, respectively, compared with \$682 million and \$2.6 billion, respectively, in the prior year periods.

The total consumer provision for credit losses for the three and nine months ended September 30, 2016 increased when compared with the prior year, as the prior year provision for credit losses included a reduction in the allowance for loan losses, primarily in the residential real estate portfolio, due to improvement in home prices and delinquencies, and increased granularity in the impairment estimates. The current year consumer provision for credit losses included an increase in the allowance for loan losses. The increase in the allowance for loan losses for the three months ended September 30, 2016 reflected loan growth in the credit card portfolio, including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio. The increase in the allowance for loan losses for the nine months ended September 30, 2016 reflected loan growth in the credit card portfolio, including newer vintages

which, as anticipated, have higher loss rates compared to the overall portfolio, as well as loan growth in the auto loan portfolio; these were partially offset by reductions in the allowance for loan losses in the residential real estate portfolio, due to continued improvement in home prices and delinquencies, as well as runoff in the student loan portfolio.

The wholesale provision for credit losses for the three months ended September 30, 2016 reflected a benefit, primarily driven by a net allowance reduction of approximately \$50 million in the Oil & Gas portfolio as a result of paydowns, loan sales, and select upgrades partially offset by select downgrades. The prior year included a net allowance increase reflecting the impact of select downgrades, including within the Oil & Gas portfolio. The wholesale provision for credit losses for the nine months ended September 30, 2016 increased as a result of additions to the wholesale allowance for credit losses, reflecting the impact of downgrades in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios.

| (in millions) | Three months ended September 30, | | | | | | Nine months ended September 30, | | | | | |
|---------------------------------|----------------------------------|---------------|---|---------------|-----------------------------------|---------------|---------------------------------|-----------------|---|---------------|-----------------------------------|-----------------|
| | Provision for loan losses | | Provision for lending-related commitments | | Total provision for credit losses | | Provision for loan losses | | Provision for lending-related commitments | | Total provision for credit losses | |
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Consumer, excluding credit card | \$ 262 | \$ (388) | \$ — | \$ (1) | \$ 262 | \$ (389) | \$ 578 | \$ (346) | \$ — | \$ 1 | \$ 578 | \$ (345) |
| Credit card | 1,038 | 759 | — | — | 1,038 | 759 | 2,978 | 2,348 | — | — | 2,978 | 2,348 |
| Total consumer | 1,300 | 371 | — | (1) | 1,300 | 370 | 3,556 | 2,002 | — | 1 | 3,556 | 2,003 |
| Wholesale | (168) | 196 | 139 | 116 | (29) | 312 | 628 | 461 | 313 | 112 | 941 | 573 |
| Total | \$ 1,132 | \$ 567 | \$ 139 | \$ 115 | \$ 1,271 | \$ 682 | \$ 4,184 | \$ 2,463 | \$ 313 | \$ 113 | \$ 4,497 | \$ 2,576 |

MARKET RISK MANAGEMENT

Market risk is the potential for 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, risk identification and classification, tools used to measure risk, and risk monitoring and control, see Market Risk Management on pages 133–139 of JPMorgan Chase's 2015 Annual Report.

The following table summarizes by line of business the predominant business activities that give rise to market risk, and the market risk management tools utilized to manage those risks. As part of the Firm's continuous evaluation and periodic enhancement of its market risk measures, during the third quarter of 2016 the Firm refined the scope of positions included in risk management VaR. In particular, certain private equity positions in the CIB, exposure arising from non-U.S. dollar denominated funding activities in Corporate, as well as seed capital investments in AM were removed from the VaR calculation. Commencing with the third quarter of 2016, exposure arising from these positions is captured using other sensitivity-based measures, such as a 10% decline in market value or a 1 basis point parallel shift in spreads, as appropriate. The Firm believes this refinement to its reported VaR measures more appropriately captures the risk of its market risk sensitive instruments. This change did not impact Regulatory VaR as these positions are not included in the calculation of Regulatory VaR. Regulatory VaR is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. The table below updates the table previously disclosed on page 134 of JPMorgan Chase's 2015 Annual Report.

Risk identification and classification by line of business

| Line of Business | Predominant business activities and related market risks | Positions included in Risk Management VaR | Positions included in Earnings at Risk | Positions included in Other Sensitivity-Based Measures |
|------------------|---|---|---|--|
| CIB | <ul style="list-style-type: none"> Makes markets and services clients across fixed income, foreign exchange, equities and commodities Market risk arising from changes in market prices (e.g. rates and credit spreads) resulting in a potential decline in net income | Market risk related to: <ul style="list-style-type: none"> Trading assets/liabilities – debt and marketable equity instruments, and derivatives, including hedges of the retained loan portfolio Certain securities purchased, loaned or sold under resale agreements and securities borrowed Fair value option elected liabilities Derivative CVA and associated hedges | <ul style="list-style-type: none"> Retained loan portfolio Deposits | <ul style="list-style-type: none"> Private equity investments measured at fair value Derivatives DVA/FVA and fair value option elected liabilities DVA |
| CCB | <ul style="list-style-type: none"> Service Mortgage loans Complex, non-linear interest rate and basis risk Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates Originates loans and takes deposits | <ul style="list-style-type: none"> Mortgage pipeline loans, classified as derivatives Warehouse loans, classified as trading assets – debt instruments MSRs Hedges of pipeline loans, warehouse loans and MSRs, classified as derivatives Interest-only securities, classified as trading assets, and related hedges, classified as derivatives Marketable equity investments measured at fair value through earnings | <ul style="list-style-type: none"> Retained loan portfolio Deposits | |
| Corporate | <ul style="list-style-type: none"> Manages the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments. | <ul style="list-style-type: none"> Derivative positions measured at fair value through non-interest revenue in earnings Marketable equity investments measured at fair value through earnings | <ul style="list-style-type: none"> Investment securities portfolio and related interest rate hedges Deposits Long-term debt and related interest rate hedges | <ul style="list-style-type: none"> Private equity investments measured at fair value Foreign exchange exposure related to Firm-issued non-USD long term debt ("LTD") and related hedges |
| AM | <ul style="list-style-type: none"> Market risk arising from the Firm's initial capital investments in products, such as mutual funds, managed by AM | <ul style="list-style-type: none"> Debt securities held in advance of distribution to clients, classified as trading assets – debt and equity instruments | <ul style="list-style-type: none"> Retained loan portfolio Deposits | <ul style="list-style-type: none"> Initial seed capital investments and related hedges, classified as derivatives Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AM (i.e. co-investments) |
| CB | <ul style="list-style-type: none"> Engages in traditional wholesale banking activities which include extension of loans and credit facilities and taking deposits. Risk arises from changes in interest rates and prepayment risk with potential for adverse impact on net interest income and interest-rate sensitive fees. | | <ul style="list-style-type: none"> Retained loan portfolio Deposits | |

Value-at-risk

JPMorgan Chase utilizes 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. The Firm therefore considers other measures in addition to VaR, such as stress testing, to capture and manage its market risk positions.

In addition, 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 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 Market Risk Management on pages 133–139 of the 2015 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 to current VaR results. For information regarding model reviews and approvals, see Model Risk Management on page 142 of the 2015 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 135 of the 2015 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 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 September 30, | | | | | | At September 30, | | Nine months ended September 30, | |
|--|----------------------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|---------------------|------------------------------------|---------------------|
| | 2016 | | | 2015 | | | | | Average | |
| | Avg. | Min | Max | Avg. | Min | Max | 2016 | 2015 | 2016 | 2015 |
| CIB trading VaR by risk type | | | | | | | | | | |
| Fixed income | \$ 49 | \$ 38 | \$ 65 | \$ 50 | \$ 43 | \$ 60 | \$ 38 | \$ 60 | \$ 47 | \$ 42 |
| Foreign exchange | 16 | 10 | 27 | 9 | 6 | 14 | 12 | 12 | 13 | 9 |
| Equities | 8 | 5 | 10 | 20 | 14 | 25 | 10 | 22 | 15 | 18 |
| Commodities and other | 9 | 7 | 11 | 10 | 8 | 12 | 8 | 10 | 9 | 9 |
| Diversification benefit to CIB trading VaR | (42) ^(a) | NM ^(b) | NM ^(b) | (35) ^(a) | NM ^(b) | NM ^(b) | (34) ^(a) | (36) ^(a) | (38) ^(a) | (36) ^(a) |
| CIB trading VaR | 40 | 34 | 50 | 54 | 44 | 68 | 34 | 68 | 46 | 42 |
| Credit portfolio VaR | 13 | 11 | 16 | 13 | 12 | 14 | 15 | 14 | 12 | 15 |
| Diversification benefit to CIB VaR | (10) ^(a) | NM ^(b) | NM ^(b) | (10) ^(a) | NM ^(b) | NM ^(b) | (10) ^(a) | (11) ^(a) | (10) ^(a) | (9) ^(a) |
| CIB VaR | 43 | 37 | 51 | 57 | 48 | 71 | 39 | 71 | 48 | 48 |
| Consumer & Community Banking VaR | 3 | 2 | 4 | 4 | 2 | 7 | 3 | 3 | 3 | 4 |
| Corporate VaR | 3 | 3 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 4 |
| Asset Management VaR | — | — | — | 3 | 3 | 4 | — | 3 | 2 | 3 |
| Diversification benefit to other VaR | (1) ^(a) | NM ^(b) | NM ^(b) | (3) ^(a) | NM ^(b) | NM ^(b) | (2) ^(a) | (3) ^(a) | — ^(a) | (4) ^(a) |
| Other VaR | 5 | 4 | 6 | 8 | 6 | 9 | 6 | 8 | 9 | 7 |
| Diversification benefit to CIB and other VaR | (5) ^(a) | NM ^(b) | NM ^(b) | (11) ^(a) | NM ^(b) | NM ^(b) | (5) ^(a) | (12) ^(a) | (10) ^(a) | (8) ^(a) |
| Total VaR | \$ 43 | \$ 37 | \$ 49 | \$ 54 | \$ 45 | \$ 67 | \$ 40 | \$ 67 | \$ 47 | \$ 47 |

(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.

As discussed on page 60, during the third quarter of 2016 the Firm refined the scope of positions included in risk management VaR. In the absence of these refinements, the average VaR, without diversification, for each of the following reported components would have been higher by the following amounts for the three months ended September 30, 2016: CIB Equities VaR by \$5 million, CIB trading VaR by \$4 million, CIB VaR by \$6 million, CCB VaR by \$1 million, Corporate VaR by \$8 million, AM VaR by \$4 million, Other VaR by \$8 million and Total VaR by \$7 million.

As presented in the table above, average Total VaR decreased \$11 million for the three months ended September 30, 2016 as compared with the respective prior year period. The reduction is primarily due to a lower risk profile in Equities risk type, as well as the aforementioned scope changes. This reduction was partially offset by changes in the risk profile of the Foreign exchange risk type.

Average total VaR for the nine months ended September 30, 2016 would have been \$2 million higher absent the aforementioned scope changes. The modification to scope was not a material component of the change in CIB trading VaR as the \$4 million increase was predominantly due to changes in the risk profile of Foreign exchange and Fixed Income risk types, offset by a lower risk profile in Equities risk type. Credit portfolio VaR declined as a result of lower exposures arising from select positions.

The Firm's average total VaR diversification benefit was \$5 million, or 12% of the sum, for the three months ended September 30, 2016 compared with \$11 million, or 20% of the sum, for the comparable 2015 period.

The Firm continues to enhance its VaR model calculations and the time series inputs related to certain asset-backed products.

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

VaR back-testing

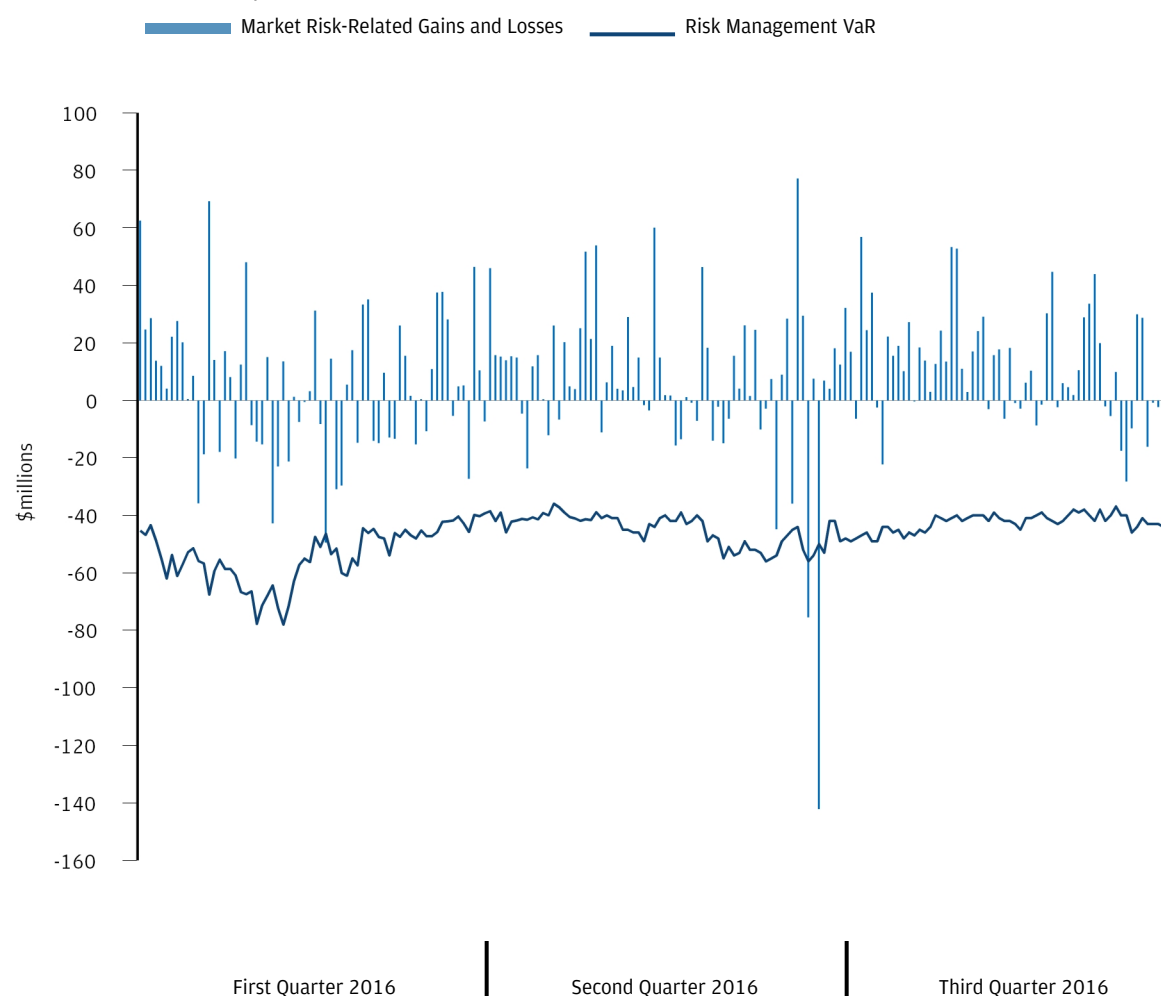
The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

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 the daily market risk-related gains and losses with the Firm's Risk Management VaR for the nine months ended September 30, 2016. 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 nine months ended September 30, 2016, the Firm observed 3 VaR back-testing exceptions and posted gains on 129 of the 195 days. The Firm observed no VaR back-testing exceptions and posted gains on 47 of the 66 days for the three months ended September 30, 2016.

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

Nine months ended September 30, 2016



For the three months ended June 30, 2016 there were 2 back-testing exceptions. These exceptions occurred towards the end of June 2016 subsequent to the U.K. referendum on membership in the European Union and reflect the elevated market volatility observed across multiple asset classes following the outcome of the vote.

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. Earnings-at-risk excludes the impact of CIB's markets-based activities and CCB's MSRs, as these risks are captured under VaR or other sensitivity-based measures.

The Firm generates a net interest income baseline, excluding CIB's markets-based activities and MSRs, 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 net interest income 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 the 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 September 30, 2016.

JPMorgan Chase's 12-month pre-tax net interest income sensitivity profiles

(Excludes the impact of CIB's markets-based activities and MSRs)

| (in billions) | Instantaneous change in rates | | | |
|--------------------|-------------------------------|---------|-------------------|-------------------|
| September 30, 2016 | +200bps | +100bps | -100bps | -200bps |
| U.S. dollar | \$ 4.5 | \$ 2.8 | 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. The Firm's U.S. dollar sensitivity profile at September 30, 2016 was not materially different than at December 31, 2015.

Separately, another U.S. dollar interest rate scenario used by the Firm – involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels – results in a 12-month pre-tax benefit to net interest income, excluding CIB's markets-based activities and MSRs, of approximately \$700 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 analysis 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 60.

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 September 30, 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.

(in millions)
September 30, 2016

| Activity | Description | Sensitivity measure | Gain/(Loss) |
|--|---|---|-------------|
| Investment Activities | | | |
| Investment management activities | Consists of seed capital and related hedges; and fund co-investments | 10% decline in market value | \$ (141) |
| Other investments | Consists of private equity and other investments held at fair value | 10% decline in market value | (384) |
| 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) |
| Non-USD LTD hedges Foreign Exchange ("FX") exposure | Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges | 10% depreciation of currency | (28) |
| Funding Spread Risk - Derivatives | Impact of changes in the spread related to derivatives DVA/FVA | 1 basis point parallel increase in spread | (5) |
| 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 | 17 |

(a) Impact recognized through OCI.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in 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.

For a discussion of the Firm's Country Risk Management organization, and country risk identification, measurement, monitoring and control, see pages 140-141 of JPMorgan Chase's 2015 Annual Report.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of September 30, 2016. The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

The \$30.7 billion increase in exposure to Germany over the past nine months largely reflects higher Euro balances primarily placed with the German central bank driven by changing client positions due to prevailing market and liquidity conditions, and to increased customer deposits and client-related lending activity.

Top 20 country exposures

| | September 30, 2016 | | | |
|-------------------------------|------------------------|---|----------------------|----------------|
| (in billions) | Lending ^(a) | Trading and investing ^{(b)(c)} | Other ^(d) | Total exposure |
| Germany | \$ 48.0 | \$ 13.1 | \$ 0.3 | \$ 61.4 |
| United Kingdom ^(e) | 22.8 | 16.1 | 1.0 | 39.9 |
| Japan | 24.0 | 4.3 | 0.3 | 28.6 |
| France | 15.5 | 9.4 | 0.2 | 25.1 |
| China | 9.9 | 6.1 | 0.7 | 16.7 |
| Canada | 11.1 | 2.1 | 0.1 | 13.3 |
| Australia | 7.3 | 5.6 | — | 12.9 |
| Switzerland | 6.7 | 0.1 | 5.7 | 12.5 |
| Brazil | 5.2 | 5.1 | — | 10.3 |
| Netherlands | 6.7 | 2.3 | 1.1 | 10.1 |
| Luxembourg | 8.8 | 0.4 | — | 9.2 |
| India | 3.9 | 4.3 | 0.3 | 8.5 |
| Korea | 4.5 | 2.9 | 0.8 | 8.2 |
| Italy | 3.9 | 3.7 | 0.1 | 7.7 |
| Hong Kong | 2.5 | 2.3 | 2.4 | 7.2 |
| Mexico | 2.8 | 2.3 | — | 5.1 |
| Singapore | 2.0 | 1.2 | 1.5 | 4.7 |
| Saudi Arabia | 3.5 | 0.8 | — | 4.3 |
| United Arab Emirates | 2.8 | 1.0 | — | 3.8 |
| Norway | 1.2 | 2.2 | — | 3.4 |

- (a) Lending includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with 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.
- (e) The Firm's lending related UK exposure as of June 30, 2016 was revised from \$34.5 billion to \$25.5 billion, with the corresponding total UK exposure at such date revised from \$54.7 billion to \$45.7 billion. Accordingly, total UK exposure decreased by \$5.8 billion during the third quarter of 2016 due to normal business activity.

CAPITAL 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 Management see pages 149–158 of JPMorgan Chase's 2015 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 by the Firm's Board of Directors, CEO and Operating Committee. The Firm's capital management strategy focuses on maintaining long-term stability to enable the Firm to build and invest in market-

leading businesses, even in a highly stressed environment. The Firm executes its capital management strategy through the establishment of minimum capital targets and a strong capital governance framework. The Firm's minimum capital targets are set based on the most binding of three pillars: an internal assessment of the Firm's capital needs; an estimate of required capital under the CCAR and Dodd Frank Act stress testing requirements; and current regulatory minimums. The capital governance framework includes regular monitoring of the Firm's capital positions, stress testing and defining escalation protocols, both at the Firm and line of business level.

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 CET1 ratios exceed the regulatory minimum as of September 30, 2016, and December 31, 2015.

| September 30, 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 | \$ 181,606 | \$ 181,606 | | \$ 180,932 | \$ 180,932 | |
| Tier 1 capital | 206,430 | 206,430 | | 206,709 | 206,709 | |
| Total capital | 241,004 | 229,324 | | 238,897 | 227,217 | |
| Risk-weighted assets | 1,480,291 | 1,515,177 | | 1,487,841 | 1,523,183 | |
| CET1 capital ratio | 12.3% | 12.0% | 6.25% | 12.2% | 11.9% | 10.5% |
| Tier 1 capital ratio | 13.9 | 13.6 | 7.75 | 13.9 | 13.6 | 12.0 |
| Total capital ratio | 16.3 | 15.1 | 9.75 | 16.1 | 14.9 | 14.0 |
| Leverage-based capital metrics | | | | | | |
| Adjusted average assets | 2,427,423 | 2,427,423 | | 2,429,463 | 2,429,463 | |
| Tier 1 leverage ratio ^(a) | 8.5% | 8.5% | 4.0 | 8.5% | 8.5% | 4.0 |
| SLR leverage exposure | NA | \$ 3,140,733 | | NA | \$ 3,142,772 | |
| SLR ^(b) | NA | 6.6% | NA | NA | 6.6% | 5.0 ^(e) |
| | | | | | | |
| December 31, 2015 (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 | \$ 175,398 | \$ 175,398 | | \$ 173,189 | \$ 173,189 | |
| Tier 1 capital | 200,482 | 200,482 | | 199,047 | 199,047 | |
| Total capital | 234,413 | 224,616 | | 229,976 | 220,179 | |
| Risk-weighted assets | 1,465,262 | 1,485,336 | | 1,474,870 | 1,495,520 | |
| CET1 capital ratio | 12.0% | 11.8% | 4.5% | 11.7% | 11.6% | 10.5% |
| Tier 1 capital ratio | 13.7 | 13.5 | 6.0 | 13.5 | 13.3 | 12.0 |
| Total capital ratio | 16.0 | 15.1 | 8.0 | 15.6 | 14.7 | 14.0 |
| Leverage-based capital metrics | | | | | | |
| Adjusted average assets | 2,358,471 | 2,358,471 | | 2,360,499 | 2,360,499 | |
| Tier 1 leverage ratio ^(a) | 8.5% | 8.5% | 4.0 | 8.4% | 8.4% | 4.0 |
| SLR leverage exposure | NA | \$ 3,079,797 | | NA | \$ 3,079,119 | |
| SLR ^(b) | NA | 6.5 | NA | NA | 6.5% | 5.0 ^(e) |

Note: As of September 30, 2016, and December 31, 2015, 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.

(a) 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.

(b) The SLR leverage ratio is not a risk-based measure of capital. The ratio is calculated by dividing Tier 1 capital by SLR Leverage exposure.

(c) Represents the transitional minimum capital ratios applicable to the Firm under Basel III as of September 30, 2016, and December 31, 2015. At September 30, 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 estimated 4.5% globally systemically important banks ("GSIB") surcharge, as of December 31, 2014, published by the Federal Reserve on July 20, 2015.

(d) Represents the minimum capital ratios applicable to the Firm on a fully phased-in Basel III basis. At September 30, 2016, and December 31, 2015, the ratios include the Firm's estimate of its Fully Phased-In U.S. GSIB surcharge of 3.5%, based on the final U.S. GSIB rule published by the Federal Reserve on July 20, 2015. The minimum capital ratios will be fully phased-in effective January 1, 2019. For additional information on the GSIB surcharge, see page 69.

(e) In the case of the SLR, the fully phased-in minimum ratio is effective beginning January 1, 2018.

Basel III overview

Basel III capital rules, for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution (“IDI”) subsidiaries, revised, among other things, the definition of capital and introduced a new CET1 capital requirement. Basel III presents two comprehensive methodologies for calculating RWA. A general (Standardized) approach (“Basel III Standardized”), and an advanced approach (“Basel III Advanced”); and sets out minimum capital ratios and overall capital adequacy standards. 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”).

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.

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 71.

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. While the Firm has imposed Basel III Standardized Fully Phased-In RWA limits on its lines of business, the Firm continues to manage each of the businesses (including line of business equity allocations), as well as the corporate functions, primarily on a Basel III Advanced Fully Phased-In basis.

For additional information on the Firm’s capital, RWA and capital ratios under the Basel III Standardized and Advanced Fully Phased-In rules and the Firm’s, JPMorgan Chase Bank, N.A.’s and Chase Bank USA, N.A.’s SLRs calculated under the Basel III Advanced Fully Phased-In rules, 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 16–17.

The Firm’s estimates of its Basel III Standardized and Advanced Fully Phased-In capital, RWA and capital ratios and of the Firm’s, JPMorgan Chase Bank, N.A.’s, and Chase Bank USA, N.A.’s SLRs reflect management’s current understanding of the U.S. Basel III rules based on the current published 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 Basel III approach (Standardized or Advanced) which results for each quarter in the lower ratio, the Collins Floor.

Certain banking organizations, including the Firm, will be 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 to be phased-in over time, beginning January 1, 2016 through January 1, 2019.

Further, the Firm will be required to hold additional levels of capital in the form of a GSIB surcharge and, as an expansion of the capital conservation buffer, any countercyclical capital buffer requirement that may be imposed.

On July 20, 2015, the Federal Reserve issued a final rule requiring GSIBs to calculate their GSIB surcharge, on an annual basis, under two separately prescribed methods, and to be subject to the higher of the two. The first method ("Method 1") reflects the GSIB surcharge as prescribed by Basel rules, and is calculated across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. The second method ("Method 2") modifies the requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor."

On July 20, 2015, the date of the last published estimate, the Federal Reserve had estimated the Firm's GSIB surcharge to be 2.5% under Method 1 and 4.5% under Method 2 as of December 31, 2014. Accordingly, the Firm's minimum capital ratios applicable in 2016 include 1.125%, resulting from the phase-in of the 4.5% GSIB surcharge estimated at the date. Based upon data as of December 31, 2015, the Firm estimates its fully phased-in GSIB surcharge would be 2.5% of CET1 capital under Method 1 and 3.5% under Method 2. The reduction in the estimated GSIB surcharge to 3.5% is expected to be phased into the Firm's minimum CET1 capital ratio commencing January 1, 2017.

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 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 currently being set at 0%, the Firm estimates its fully phased-in CET1 capital requirement 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 and 10% Total capital requirement. Each of the Firm's IDI subsidiaries must maintain a minimum 5% Tier 1 leverage, 6.5% CET1, 8% Tier 1 and 10% Total capital requirement to meet the definition of "well-capitalized" under the Prompt Correction Action ("PCA") requirements of the FDIC Improvement Act for IDI subsidiaries. The PCA standards for IDI subsidiaries were effective January 1, 2015.

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 20.

Capital components

| (in millions) | September 30, 2016 |
|--|--------------------|
| Total stockholders' equity | \$ 254,331 |
| Less: Preferred stock | 26,068 |
| Common stockholders' equity | 228,263 |
| Less: | |
| Goodwill | 47,302 |
| Other intangible assets | 887 |
| Add: | |
| Deferred tax liabilities ^(a) | 3,232 |
| Less: Other CET1 capital adjustments | 2,374 |
| Standardized/Advanced CET1 capital | 180,932 |
| Preferred stock | 26,068 |
| Less: | |
| Other Tier 1 adjustments ^(b) | 291 |
| Standardized/Advanced Tier 1 capital | \$ 206,709 |
| Long-term debt and other instruments qualifying as Tier 2 capital | \$ 16,947 |
| Qualifying allowance for credit losses | 15,304 |
| Other | (63) |
| Standardized Fully Phased-In Tier 2 capital | \$ 32,188 |
| Standardized Fully Phased-in Total capital | \$ 238,897 |
| Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital | (11,680) |
| Advanced Fully Phased-In Tier 2 capital | \$ 20,508 |
| Advanced Fully Phased-In Total capital | \$ 227,217 |

(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 September 30, 2016.

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 September 30, 2016.

| (in millions) | September 30, 2016 |
|--|-----------------------|
| Transitional CET1 capital | \$ 181,606 |
| AOCI phase-in ^(a) | 772 |
| CET1 capital deduction phase-in ^(b) | (1,067) |
| Intangibles deduction phase-in ^(c) | (319) |
| Other adjustments to CET1 capital ^(d) | (60) |
| Fully Phased-In CET1 capital | \$ 180,932 |

- (a) Includes the remaining balance of AOCI related to 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 nine months ended September 30, 2016.

| Nine months ended September 30, (in millions) | 2016 |
|---|-------------------|
| Standardized/Advanced CET1 capital at December 31, 2015 | \$ 173,189 |
| Net income applicable to common equity | 16,771 |
| Dividends declared on common stock | (5,167) |
| Net purchase of treasury stock | (5,577) |
| Changes in additional paid-in capital | (397) |
| Changes related to AOCI ^(a) | 1,366 |
| Adjustment related to DVA ^(a) | 574 |
| Other | 173 |
| Increase in Standardized/Advanced CET1 capital | 7,743 |
| Standardized/Advanced CET1 capital at September 30, 2016 | \$ 180,932 |
| Standardized/Advanced Tier 1 capital at December 31, 2015 | \$ 199,047 |
| Change in CET1 capital | 7,743 |
| Net issuance of noncumulative perpetual preferred stock | — |
| Other | (81) |
| Increase in Standardized/Advanced Tier 1 capital | 7,662 |
| Standardized/Advanced Tier 1 capital at September 30, 2016 | \$ 206,709 |
| Standardized Tier 2 capital at December 31, 2015 | \$ 30,929 |
| Change in long-term debt and other instruments qualifying as Tier 2 | 268 |
| Change in qualifying allowance for credit losses | 963 |
| Other | 28 |
| Increase in Standardized Tier 2 capital | 1,259 |
| Standardized Tier 2 capital at September 30, 2016 | \$ 32,188 |
| Standardized Total capital at September 30, 2016 | \$ 238,897 |
| Advanced Tier 2 capital at December 31, 2015 | \$ 21,132 |
| Change in long-term debt and other instruments qualifying as Tier 2 | 268 |
| Change in qualifying allowance for credit losses | (919) |
| Other | 27 |
| Increase in Advanced Tier 2 capital | (624) |
| Advanced Tier 2 capital at September 30, 2016 | \$ 20,508 |
| Advanced Total capital at September 30, 2016 | \$ 227,217 |

- (a) Effective January 1, 2016, the adjustment reflects the impact of the adoption of DVA through OCI. For further discussion of the accounting change refer to Note 19.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the nine months ended September 30, 2016. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

| Nine months ended September 30, 2016 (in billions) | Standardized | | | Advanced | | | |
|--|--------------------|--------------------|-----------------|--------------------|--------------------|-------------------------|-----------------|
| | Credit risk RWA | Market risk RWA | Total RWA | Credit risk RWA | Market risk RWA | Operational risk RWA | Total RWA |
| At December 31, 2015 | \$ 1,333 | \$ 142 | \$ 1,475 | \$ 954 | \$ 142 | \$ 400 | \$ 1,496 |
| Model & data changes ^(a) | 3 | (14) | (11) | 12 | (14) | — | (2) |
| Portfolio runoff ^(b) | (10) | (2) | (12) | (11) | (2) | — | (13) |
| Movement in portfolio levels ^(c) | 21 | 15 | 36 | 27 | 15 | — | 42 |
| Changes in RWA | 14 | (1) | 13 | 28 | (1) | — | 27 |
| September 30, 2016 | \$ 1,347 | \$ 141 | \$ 1,488 | \$ 982 | \$ 141 | \$ 400 | \$ 1,523 |

(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

For additional information on the SLR, see Capital Management on pages 149-158 of JPMorgan Chase's 2015 Annual Report.

The following table presents the components of the Firm's Fully Phased-In SLR as of September 30, 2016.

| (in millions, except ratio) | September 30, 2016 |
|--|-----------------------|
| Tier 1 Capital | \$ 206,709 |
| Total average assets | 2,476,962 |
| Less: amounts deducted from Tier 1 capital | 47,499 |
| Total adjusted average assets ^(a) | 2,429,463 |
| Off-balance sheet exposures ^(b) | 713,309 |
| SLR leverage exposure | \$ 3,142,772 |
| 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 in the reporting quarter.

As of September 30, 2016, the Firm estimates that JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s Fully Phased-In SLRs are approximately 6.6% and 9.5%, 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, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In) and economic risk. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business common equity

| (in billions) | September 30, 2016 | December 31, 2015 |
|--|-----------------------|----------------------|
| Consumer & Community Banking | \$ 51.0 | \$ 51.0 |
| Corporate & Investment Bank | 64.0 | 62.0 |
| Commercial Banking | 16.0 | 14.0 |
| Asset Management | 9.0 | 9.0 |
| Corporate | 88.3 | 85.5 |
| Total common stockholders' equity | \$ 228.3 | \$ 221.5 |

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. The line of business equity allocations are updated as refinements are implemented. The table below reflects the Firm's assessed level of capital required for each line of business as of the dates indicated.

| Line of business common equity (in billions) | Quarterly average | | |
|---|-------------------|-----------------|-----------------|
| | 3Q16 | 4Q15 | 3Q15 |
| Consumer & Community Banking | \$ 51.0 | \$ 51.0 | \$ 51.0 |
| Corporate & Investment Bank | 64.0 | 62.0 | 62.0 |
| Commercial Banking | 16.0 | 14.0 | 14.0 |
| Asset Management | 9.0 | 9.0 | 9.0 |
| Corporate | 86.1 | 83.5 | 81.0 |
| Total common stockholders' equity | \$ 226.1 | \$ 219.5 | \$ 217.0 |

Planning and stress testing

CCAR

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

On June 29, 2016, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2016 capital plan.

Capital actions

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities. On May 17, 2016, the Firm announced that its Board of Directors had increased the quarterly common stock dividend to \$0.48 per share, effective with the dividend paid on July 31, 2016. The Firm's dividends will be subject to the Board of Directors' approval at the customary times those dividends are to be declared.

Common equity

On March 17, 2016, the Firm announced that its Board of Directors had authorized the repurchase of up to an additional \$1.9 billion of common equity (common stock and warrants) through June 30, 2016 under its equity repurchase program. This amount is in addition to the \$6.4 billion of common equity that was previously authorized for repurchase between April 1, 2015 and June 30, 2016.

Following receipt in June, 2016 of the Federal Reserve's non-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. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the three and nine months ended September 30, 2016 and 2015. There were no warrants repurchased during the three and nine months ended September 30, 2016 and 2015.

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|--|-------------------------------------|----------|------------------------------------|----------|
| | 2016 | 2015 | 2016 | 2015 |
| Total shares of common stock repurchased | 35.6 | 19.1 | 110.6 | 70.8 |
| Aggregate common stock repurchases | \$ 2,295 | \$ 1,248 | \$ 6,831 | \$ 4,397 |

There were 45.7 million warrants outstanding at September 30, 2016 compared with 47.4 million outstanding at December 31, 2015.

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 20 of JPMorgan Chase's 2015 Form 10-K.

Preferred Stock

Preferred stock dividends declared were \$412 million and \$1,235 million for the three and nine months ended September 30, 2016.

For additional information on the Firm's preferred stock, see Note 22 of JPMorgan Chase's 2015 Annual Report.

Other capital requirements

TLAC

In November 2015, the Financial Stability Board ("FSB") finalized the Total Loss Absorbing Capacity ("TLAC") standard for GSIBs, which establishes the criteria for TLAC eligible debt and capital instruments and defines the minimum requirements for amounts of loss absorbing and recapitalization capacity. This amount and type of debt and capital instruments is intended to effectively absorb losses, as necessary, upon the failure of a GSIB, without imposing such losses on taxpayers of the relevant jurisdiction or causing severe systemic disruptions, and thereby ensuring the continuity of the GSIB's critical functions. The final standard will require GSIBs to meet a common minimum TLAC requirement beginning January 1, 2019.

On October 30, 2015, the Federal Reserve issued proposed rules that would require 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 eligible TLAC and long-term debt satisfying certain eligibility criteria ("eligible LTD") commencing January 1, 2019. These proposed TLAC rules

would disqualify from eligible LTD, among other instruments, senior debt securities that permit acceleration for reasons other than insolvency or payment default, as well as structured notes and debt securities not governed by U.S. law. The Firm is awaiting the publication of the final rules to determine the full impact on the amount of eligible LTD the Firm will need to issue to be compliant.

For additional information on TLAC, see Capital Management on page 156 of JPMorgan Chase's 2015 Annual Report.

Broker-dealer regulatory capital

At September 30, 2016, JPMorgan Chase's principal U.S. broker-dealer subsidiaries were JPMorgan Securities and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the CFTC.

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At September 30, 2016, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was \$12.5 billion, exceeding the minimum requirement by \$9.8 billion, and JPMorgan Clearing's net capital was \$6.9 billion, exceeding the minimum requirement by \$5.2 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of \$1.0 billion and is also required to notify the SEC in the event that tentative net capital is less than \$5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of September 30, 2016, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

Effective October 1, 2016, JPMorgan Securities merged with JPMorgan Clearing. JPMorgan Securities is the surviving entity in the merger, and its name will remain unchanged.

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 Regulation Authority ("PRA") and Financial Conduct Authority ("FCA"). J.P. Morgan Securities plc is subject to the European Union Capital Requirements Regulation and U.K. PRA capital rules, which implement Basel III.

At September 30, 2016, J.P. Morgan Securities plc had estimated total capital of \$34.4 billion, its estimated CET1 capital ratio was 13.7% and its estimated Total capital ratio was 17.3%. Both capital ratios exceeded the minimum standards of 4.5% and 8.0%, respectively, under the transitional requirements of the European Union's Basel III Capital Requirements Directive and Regulation, as well as the additional capital requirements specified by the PRA.

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. The following discussion of JPMorgan Chase's Liquidity Risk Management should be read in conjunction with pages 159-164 of JPMorgan Chase's 2015 Annual Report.

LCR and NSFR

The U.S. LCR rule requires the Firm to measure the amount of HQLA held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event. The LCR was required to be 90% at January 1, 2016, increasing to a minimum of 100% on January 1, 2017 onward. At September 30, 2016, the Firm was compliant with the fully phased-in U.S. LCR.

The Basel Committee final standard for the net stable funding ratio ("Basel NSFR") is intended to measure the "available" amount 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 June 30, 2016, and on its current understanding of the proposed rule.

HQLA

HQLA is the amount of assets that qualify for inclusion in the U.S. LCR. HQLA primarily consists of cash and certain unencumbered high quality liquid assets as defined in the final rule.

On April 1, 2016, the Federal Reserve published a final rule permitting investment-grade, U.S. general obligation state and municipal securities that meet certain criteria to be included in HQLA for purposes of the U.S. LCR, subject to certain limits. The final rule became effective beginning July 1, 2016, and did not have a material effect on the Firm's HQLA or LCR.

As of September 30, 2016, the Firm's HQLA was \$539 billion, compared with \$496 billion as of December 31, 2015. The increase in HQLA primarily reflects deposit growth in excess of loan growth as well as an increase in long-term debt. Certain of these actions resulted in increased excess liquidity at JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. which is excluded from the Firm's HQLA as required under the U.S. LCR rules. The Firm's HQLA may fluctuate from period to period primarily due to normal flows from client activity.

The following table presents HQLA included in the LCR, broken out by HQLA-eligible cash and securities as of September 30, 2016.

| (in billions) | September 30, 2016 | |
|------------------------------------|--------------------|-----|
| HQLA | | |
| Eligible cash ^(a) | \$ | 351 |
| Eligible securities ^(b) | | 188 |
| Total HQLA^(c) | \$ | 539 |

(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 U.S. LCR rules.

(c) Excludes excess HQLA at JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

As of September 30, 2016, in addition to HQLA reported above, the Firm has approximately \$255 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 forming part of the excess liquidity at JPMorgan Chase Bank, N.A. Furthermore, the Firm 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 September 30, 2016, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately \$203 billion. This remaining borrowing capacity excludes the benefit of securities included above in HQLA or other unencumbered securities currently held at the Federal Reserve Bank discount window for which the Firm has not drawn liquidity.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio (\$888.1 billion at September 30, 2016), is funded with a portion of the Firm's deposits (\$1,376.1 billion at September 30, 2016), 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 September 30, 2016, and December 31, 2015, and the average deposit balances for the three and nine months ended September 30, 2016 and 2015, respectively.

| Deposits (in millions) | September 30, 2016 | December 31, 2015 | Three months ended September 30, | | Nine months ended September 30, | |
|------------------------------|-----------------------|----------------------|-------------------------------------|---------------------|------------------------------------|---------------------|
| | | | Average | | Average | |
| | | | 2016 | 2015 | 2016 | 2015 |
| Consumer & Community Banking | \$ 605,117 | \$ 557,645 | \$ 593,671 | \$ 535,987 | \$ 579,741 | \$ 525,951 |
| Corporate & Investment Bank | 432,384 | 395,228 | 413,698 | 400,690 | 404,501 | 419,562 |
| Commercial Banking | 175,839 | 172,470 | 172,204 | 176,619 | 170,810 | 186,625 |
| Asset Management | 157,274 | 146,766 | 153,121 | 141,896 | 151,656 | 150,840 |
| Corporate | 5,524 | 7,606 | 5,281 | 15,769 | 5,788 | 18,988 |
| Total Firm | \$ 1,376,138 | \$ 1,279,715 | \$ 1,337,975 | \$ 1,270,961 | \$ 1,312,496 | \$ 1,301,966 |

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 relatively stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.

The Firm's loans-to-deposits ratio was 65% at both September 30, 2016 and December 31, 2015.

Total deposits for the Firm were \$1,376.1 billion as of September 30, 2016, compared with \$1,279.7 billion at December 31, 2015 (61% of total liabilities at both September 30, 2016 and December 31, 2015). The increase was attributable to higher wholesale and consumer deposits. The increase in wholesale deposits was mainly driven by growth in client activity in CIB's Treasury Services business, and inflows in AM partly related to the new rules governing money market funds. The increase in consumer deposits reflected continuing strong growth from existing and new customers, and the impact of low attrition rates.

The Firm has typically experienced higher customer deposit inflows at quarter-ends. Therefore, the Firm believes average deposit balances are generally more representative of deposit trends. The increase in the average deposits for the three months ended September 30, 2016, compared with the three months ended September 30, 2015, was predominantly driven by an increase in consumer deposits. The increase in the average deposits for the nine months ended September 30, 2016, compared with the nine months ended September 30, 2015, was driven by an increase in consumer deposits largely offset by a decrease in wholesale deposits reflecting the Firm's actions in 2015 to reduce non-operating deposits. For further discussions of deposit and liability balance trends, see the discussion of the Firm's Business Segment Results and the Consolidated Balance Sheets Analysis on pages 18-40 and pages 12-13, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of September 30, 2016, and December 31, 2015, and average balances for the three and nine months ended September 30, 2016 and 2015, respectively. For additional information, see the Consolidated Balance Sheets Analysis on pages 12-13 and Note 12.

| Sources of funds (excluding deposits) (in millions) | September 30, 2016 | December 31, 2015 | Three months ended September 30, | | Nine months ended September 30, | |
|--|-----------------------|----------------------|-------------------------------------|-------------------|------------------------------------|-------------------|
| | | | Average | | Average | |
| | | | 2016 | 2015 | 2016 | 2015 |
| Commercial paper: | | | | | | |
| Wholesale funding | \$ 12,258 | \$ 15,562 | \$ 13,798 | \$ 19,580 | \$ 16,257 | \$ 19,808 |
| Client cash management ^(a) | — | — | — | 6,587 | — | 25,135 |
| Total commercial paper | \$ 12,258 | \$ 15,562 | \$ 13,798 | \$ 26,167 | \$ 16,257 | \$ 44,943 |
| Obligations of Firm-administered multi-seller conduits^(a) | \$ 3,659 | \$ 8,724 | \$ 5,872 | \$ 13,275 | \$ 5,900 | \$ 12,237 |
| Other borrowed funds | \$ 24,479 | \$ 21,105 | \$ 19,818 | \$ 28,466 | \$ 20,051 | \$ 30,516 |
| Securities loaned or sold under agreements to repurchase: | | | | | | |
| Securities sold under agreements to repurchase | \$ 148,041 | \$ 129,598 | \$ 163,530 | \$ 165,099 | \$ 156,378 | \$ 171,280 |
| Securities loaned | 15,626 | 18,174 | 12,129 | 17,897 | 14,528 | 20,353 |
| Total securities loaned or sold under agreements to repurchase^{(b)(c)} | \$ 163,667 | \$ 147,772 | \$ 175,659 | \$ 182,996 | \$ 170,906 | \$ 191,633 |
| Senior notes | \$ 161,374 | \$ 149,964 | \$ 157,318 | \$ 148,946 | \$ 152,894 | \$ 146,558 |
| Trust preferred securities | 3,963 | 3,969 | 3,965 | 3,966 | 3,968 | 4,465 |
| Subordinated debt | 23,152 | 25,027 | 23,779 | 26,982 | 24,769 | 27,828 |
| Structured notes | 38,301 | 32,813 | 37,323 | 31,159 | 35,499 | 30,916 |
| Total long-term unsecured funding | \$ 226,790 | \$ 211,773 | \$ 222,385 | \$ 211,053 | \$ 217,130 | \$ 209,767 |
| Credit card securitization ^(a) | \$ 33,424 | \$ 27,906 | \$ 31,074 | \$ 30,779 | \$ 28,604 | \$ 31,106 |
| Other securitizations ^(d) | 1,583 | 1,760 | 1,639 | 1,878 | 1,698 | 1,941 |
| FHLB advances | 79,523 | 71,581 | 72,687 | 73,006 | 71,158 | 69,132 |
| Other long-term secured funding ^(e) | 3,105 | 5,297 | 5,223 | 4,354 | 5,130 | 4,308 |
| Total long-term secured funding | \$ 117,635 | \$ 106,544 | \$ 110,623 | \$ 110,017 | \$ 106,590 | \$ 106,487 |
| Preferred stock^(f) | \$ 26,068 | \$ 26,068 | \$ 26,068 | \$ 25,718 | \$ 26,068 | \$ 23,357 |
| Common stockholders' equity^(f) | \$ 228,263 | \$ 221,505 | \$ 226,089 | \$ 217,023 | \$ 224,034 | \$ 214,389 |

(a) Included in beneficial interests issued by consolidated VIEs on the Firm's Consolidated balance sheets.

(b) Excludes federal funds purchased.

(c) Excluded long-term structured repurchase agreements of \$3.8 billion and \$4.2 billion as of September 30, 2016, and December 31, 2015, respectively, and average balances of \$3.5 billion and \$3.9 billion for the three months ended September 30, 2016 and 2015, respectively, and \$4.3 billion and \$3.5 billion for the nine months ended September 30, 2016 and 2015, respectively.

(d) 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.

(e) Includes long-term structured notes which are secured.

(f) For additional information on preferred stock and common stockholders' equity see Capital Management on pages 67-73 and the Consolidated statements of changes in stockholders' equity on page 88; and Note 22 and Note 23 of JPMorgan Chase's 2015 Annual Report.

(g) During the third quarter of 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program.

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 at September 30, 2016, from December 31, 2015, was predominantly due to higher client-driven market-making activities in CIB. The decrease in the average balance of securities loaned or sold under agreements to repurchase for the three and nine months ended

September 30, 2016, compared with September 30, 2015, was largely due to lower 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 by expected client activity, liquidity considerations, and regulatory 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. The following table summarizes long-term unsecured issuance and maturities or redemptions for the three and nine months ended September 30, 2016 and 2015. For additional information, see Note 21 of JPMorgan Chase's 2015 Annual Report.

| Long-term unsecured funding (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|------------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Issuance | | | | |
| Senior notes issued in the U.S. market | \$ 8,467 | \$ 2,639 | \$ 21,654 | \$ 16,225 |
| Senior notes issued in non-U.S. markets | 2,172 | 1,261 | 7,063 | 8,545 |
| Total senior notes | 10,639 | 3,900 | 28,717 | 24,770 |
| Subordinated debt | — | 1,488 | — | 3,210 |
| Structured notes | 4,643 | 5,514 | 18,254 | 18,123 |
| Total long-term unsecured funding - issuance | \$ 15,282 | \$ 10,902 | \$ 46,971 | \$ 46,103 |
| Maturities/redemptions | | | | |
| Senior notes | \$ 6,229 | \$ 1,370 | \$ 22,539 | \$ 14,089 |
| Trust preferred securities | — | — | — | 1,500 |
| Subordinated debt | 521 | 573 | 2,523 | 3,605 |
| Structured notes | 3,233 | 4,040 | 11,774 | 14,364 |
| Total long-term unsecured funding - maturities/redemptions | \$ 9,983 | \$ 5,983 | \$ 36,836 | \$ 33,558 |

The Firm raises secured long-term funding primarily through securitization of consumer credit card loans and advances from the FHLBs. The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemptions for the three and nine months ended September 30, 2016 and 2015, respectively.

| Long-term secured funding (in millions) | Three months ended September 30, | | | | Nine months ended September 30, | | | |
|--|----------------------------------|-----------------|------------------------|-----------------|---------------------------------|------------------|------------------------|------------------|
| | Issuance | | Maturities/Redemptions | | Issuance | | Maturities/Redemptions | |
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Credit card securitization | \$ 4,463 | \$ 700 | \$ — | \$ 1,850 | \$ 8,277 | \$ 6,826 | \$ 2,775 | \$ 7,980 |
| Other securitizations ^(a) | — | — | 58 | 63 | — | — | 177 | 191 |
| FHLB advances | 15,900 | 4,000 | 5,902 | 3,003 | 15,900 | 16,550 | 7,956 | 8,006 |
| Other long-term secured funding ^(b) | 89 | 31 | 2,546 | 141 | 415 | 294 | 2,635 | 350 |
| Total long-term secured funding | \$ 20,452 | \$ 4,731 | \$ 8,506 | \$ 5,057 | \$ 24,592 | \$ 23,670 | \$ 13,543 | \$ 16,527 |

(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 2015 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 14, and credit risk, liquidity risk and credit-related contingent features in Note 5.

The credit ratings of the Parent Company and the Firm's principal bank and nonbank subsidiaries as of September 30, 2016, were as follows.

| September 30, 2016 | 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 | Aa3 | 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 |

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced as noted above. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral 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.

SUPERVISION AND REGULATION

For further information on Supervision and Regulation, see the Supervision and regulation section on pages 1-8 of JPMorgan Chase's 2015 Form 10-K.

For more information about the applicable requirements relating to risk-based capital and leverage in the U.S. under Basel III, including GSIB requirements, TLAC standards, the Firm's CCAR, the net capital of J.P. Morgan Securities LLC and J.P. Morgan Clearing Corp., and the applicable requirements relating to risk-based capital for J.P. Morgan Securities plc, see Capital Management on pages 67-73 and Note 20.

Under Basel III, bank holding companies and banks are required to measure their liquidity against two specific

liquidity tests: the LCR and the NSFR. For additional information on these ratios, see Liquidity Risk Management on pages 74-78.

For further information on Resolution and Recovery, see Executive Overview Regulatory and Business Developments section on pages 6-7.

Dividends

At September 30, 2016, JPMorgan Chase estimated that its banking subsidiaries could pay, in the aggregate, approximately \$31 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators.

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. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses and the significant judgments involved, see Allowance for credit losses on pages 130-132, 165-167 and Note 15 of JPMorgan Chase's 2015 Annual Report; for amounts recorded as of September 30, 2016 and 2015, see Allowance for credit losses on pages 57-59 and Note 14 of this Form 10-Q.

As noted in the discussion on pages 165-167 of JPMorgan Chase's 2015 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 any changes to underlying external and Firm-specific historical data. In many cases, the use of alternate estimates (for example, the effect of home prices and unemployment rates on consumer delinquency, or the calibration between the Firm's wholesale loan risk ratings and external credit ratings) or data sources (for example, external PD and loss given default ("LGD") factors that incorporate industry-wide information, versus Firm-specific history) 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 September 30, 2016, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- For PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment rates from current levels could imply an increase to modeled credit loss estimates of approximately \$600 million.
- For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately \$125 million.
- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately \$700 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 \$2.0 billion.
- A 100 basis point increase in estimated LGD for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately \$175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may 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 3.

| September 30, 2016 (in billions, except ratio data) | Total assets at fair value | Total level 3 assets |
|--|-------------------------------|-------------------------|
| Trading debt and equity instruments | \$ 309.2 | \$ 7.9 |
| Derivative receivables ^(a) | 65.6 | 6.2 |
| Trading assets | 374.8 | 14.1 |
| AFS securities | 220.4 | 0.8 |
| Loans | 1.9 | 0.8 |
| MSRs | 4.9 | 4.9 |
| Private equity investments ^(b) | 1.8 | 1.7 |
| Other | 27.8 | 0.7 |
| Total assets measured at fair value on a recurring basis | \$ 631.6 | \$ 23.0 |
| Total assets measured at fair value on a nonrecurring basis | 1.1 | 0.8 |
| Total assets measured at fair value | \$ 632.7 | \$ 23.8 |
| Total Firm assets | \$ 2,521.0 | |
| 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) | | 3.8% |

(a) For purposes of table above, the derivative receivables total reflects the impact of netting adjustments; however, the \$6.2 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. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables balance would be \$1.9 billion at September 30, 2016; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(b) Private equity instruments represent investments within Corporate.

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 model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs – including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality,

the Firm's credit-worthiness, 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 3.

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 3.

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 page 168 of JPMorgan Chase's 2015 Annual Report.

For the three months ended September 30, 2016, 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 September 30, 2016.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of the impact of 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 16.

Income taxes

For a description of the significant assumptions, judgments and interpretations associated with the accounting for income taxes, see Income taxes on page 169 of JPMorgan Chase's 2015 Annual Report.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 23 of this Form 10-Q, and Note 31 of JPMorgan Chase's 2015 Annual Report.

ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board (“FASB”) Standards Adopted since January 1, 2016

| Standard | Summary of guidance | Effects on financial statements |
|--|--|---|
| Amendments to the consolidation analysis | <ul style="list-style-type: none"> Eliminates the deferral issued by the FASB in February 2010 of VIE-related accounting requirements for certain investment funds, including mutual funds, private equity funds and hedge funds. Amends the evaluation of fees paid to a decision-maker or a service provider, and exempts certain money market funds from consolidation. | <ul style="list-style-type: none"> Adopted January 1, 2016. There was no material impact on the Firm's Consolidated Financial Statements. For further information, see Note 1. |
| Improvements to employee share-based payment accounting | <ul style="list-style-type: none"> Requires that all excess tax benefits and tax deficiencies that pertain to employee stock-based incentive payments be recognized within income tax expense in the Consolidated statements of income, rather than within additional paid-in capital. | <ul style="list-style-type: none"> Adopted January 1, 2016. There was no material impact on the Firm's Consolidated Financial Statements. |
| Measuring the financial assets and financial liabilities of a consolidated collateralized financing entity | <ul style="list-style-type: none"> Provides an alternative for consolidated financing VIEs to elect: (1) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (2) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities. | <ul style="list-style-type: none"> Adopted January 1, 2016. There was no material impact on the Firm's Consolidated Financial Statements as the Firm has historically measured the financial assets and liabilities using the more observable fair value. |
| Recognition and measurement of financial assets and financial liabilities – DVA to OCI | <ul style="list-style-type: none"> For financial liabilities where the fair value option has been elected, the portion of the total change in fair value caused by changes in the Firm's own credit risk (i.e., DVA) is required to be presented separately in OCI. Requires a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption. | <ul style="list-style-type: none"> Adopted January 1, 2016. There was no material impact on the Firm's Consolidated Financial Statements. For additional information about the impact of the adoption of the new accounting guidance, see Notes 3, 4 and 19. |

FASB Standards Issued but not yet Adopted

| Standard | Summary of guidance | Effects on financial statements |
|---|--|---|
| Revenue recognition – revenue from contracts with customers <i>Issued May 2014</i> | <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 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 results of operations 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. 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 revenue). |
| Recognition and measurement of financial assets and financial liabilities <i>Issued January 2016</i> | <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 is currently evaluating the potential impact on the Consolidated Financial Statements. |

FASB Standards Issued but not yet Adopted (continued)

| Standard | Summary of guidance | Effects on financial statements |
|--|--|--|
| Leases <i>Issued February 2016</i> | <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 a gross-up of its Consolidated balance sheets as a result of recognizing lease liabilities and right of use assets; the extent of such gross-up is under evaluation. The Firm does not expect material changes to the recognition of operating lease expense in its Consolidated results of operations. |
| Financial instruments - credit losses <i>Issued June 2016</i> | <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. |
| Classification of certain cash receipts and cash payments in the statement of cash flows <i>Issued August 2016</i> | <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. |

(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;
- 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 the Firm’s Annual Report on Form 10-K for the year ended December 31, 2015.

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 September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|-----------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Revenue | | | | |
| Investment banking fees | \$ 1,866 | \$ 1,604 | \$ 4,843 | \$ 5,231 |
| Principal transactions | 3,451 | 2,367 | 9,106 | 8,856 |
| Lending- and deposit-related fees | 1,484 | 1,463 | 4,290 | 4,244 |
| Asset management, administration and commissions | 3,597 | 3,845 | 10,902 | 11,667 |
| Securities gains | 64 | 33 | 136 | 129 |
| Mortgage fees and related income | 624 | 469 | 1,980 | 1,957 |
| Card income | 1,202 | 1,447 | 3,861 | 4,493 |
| Other income | 782 | 628 | 2,844 | 1,796 |
| Noninterest revenue | 13,070 | 11,856 | 37,962 | 38,373 |
| Interest income | 14,070 | 12,739 | 41,435 | 37,818 |
| Interest expense | 2,467 | 1,815 | 7,105 | 5,533 |
| Net interest income | 11,603 | 10,924 | 34,330 | 32,285 |
| Total net revenue | 24,673 | 22,780 | 72,292 | 70,658 |
| Provision for credit losses | 1,271 | 682 | 4,497 | 2,576 |
| Noninterest expense | | | | |
| Compensation expense | 7,669 | 7,320 | 23,107 | 23,057 |
| Occupancy expense | 899 | 965 | 2,681 | 2,821 |
| Technology, communications and equipment expense | 1,741 | 1,546 | 5,024 | 4,536 |
| Professional and outside services | 1,665 | 1,776 | 4,913 | 5,178 |
| Marketing | 825 | 704 | 2,200 | 1,937 |
| Other expense | 1,664 | 3,057 | 4,013 | 7,222 |
| Total noninterest expense | 14,463 | 15,368 | 41,938 | 44,751 |
| Income before income tax expense/(benefit) | 8,939 | 6,730 | 25,857 | 23,331 |
| Income tax expense/(benefit) | 2,653 | (74) | 7,851 | 4,323 |
| Net income | \$ 6,286 | \$ 6,804 | \$ 18,006 | \$ 19,008 |
| Net income applicable to common stockholders | \$ 5,747 | \$ 6,270 | \$ 16,403 | \$ 17,498 |
| Net income per common share data | | | | |
| Basic earnings per share | \$ 1.60 | \$ 1.70 | \$ 4.51 | \$ 4.72 |
| Diluted earnings per share | 1.58 | 1.68 | 4.48 | 4.68 |
| Weighted-average basic shares | 3,597.4 | 3,694.4 | 3,634.4 | 3,709.2 |
| Weighted-average diluted shares | 3,629.6 | 3,725.6 | 3,664.3 | 3,742.2 |
| Cash dividends declared per common share | \$ 0.48 | \$ 0.44 | \$ 1.40 | \$ 1.28 |

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 September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|-----------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Net income | \$ 6,286 | \$ 6,804 | \$ 18,006 | \$ 19,008 |
| Other comprehensive income/(loss), after-tax | | | | |
| Unrealized gains/(losses) on investment securities | (160) | (291) | 1,132 | (1,621) |
| Translation adjustments, net of hedges | 4 | (5) | 5 | (12) |
| Cash flow hedges | 36 | (106) | (121) | 51 |
| Defined benefit pension and OPEB plans | 42 | 51 | 123 | 144 |
| DVA on fair value option elected liabilities | (66) | NA | (11) | NA |
| Total other comprehensive income/(loss), after-tax | (144) | (351) | 1,128 | (1,438) |
| Comprehensive income | \$ 6,142 | \$ 6,453 | \$ 19,134 | \$ 17,570 |

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) | Sep 30, 2016 | Dec 31, 2015 |
|--|---------------------|---------------------|
| Assets | | |
| Cash and due from banks | \$ 21,390 | \$ 20,490 |
| Deposits with banks | 396,200 | 340,015 |
| Federal funds sold and securities purchased under resale agreements (included \$22,986 and \$23,141 at fair value) | 232,637 | 212,575 |
| Securities borrowed (included \$0 and \$395 at fair value) | 109,197 | 98,721 |
| Trading assets (included assets pledged of \$123,775 and \$115,284) | 374,837 | 343,839 |
| Securities (included \$220,390 and \$241,754 at fair value and assets pledged of \$18,501 and \$14,883) | 272,401 | 290,827 |
| Loans (included \$1,911 and \$2,861 at fair value) | 888,054 | 837,299 |
| Allowance for loan losses | (14,204) | (13,555) |
| Loans, net of allowance for loan losses | 873,850 | 823,744 |
| Accrued interest and accounts receivable | 64,333 | 46,605 |
| Premises and equipment | 14,208 | 14,362 |
| Goodwill | 47,302 | 47,325 |
| Mortgage servicing rights | 4,937 | 6,608 |
| Other intangible assets | 887 | 1,015 |
| Other assets (included \$7,561 and \$7,604 at fair value and assets pledged of \$1,522 and \$1,286) | 108,850 | 105,572 |
| Total assets^(a) | \$ 2,521,029 | \$ 2,351,698 |
| Liabilities | | |
| Deposits (included \$12,991 and \$12,516 at fair value) | \$ 1,376,138 | \$ 1,279,715 |
| Federal funds purchased and securities loaned or sold under repurchase agreements (included \$1,436 and \$3,526 at fair value) | 168,491 | 152,678 |
| Commercial paper | 12,258 | 15,562 |
| Other borrowed funds (included \$10,021 and \$9,911 at fair value) | 24,479 | 21,105 |
| Trading liabilities | 143,269 | 126,897 |
| Accounts payable and other liabilities (included \$7,390 and \$4,401 at fair value) | 190,412 | 177,638 |
| Beneficial interests issued by consolidated VIEs (included \$48 and \$787 at fair value) | 42,233 | 41,879 |
| Long-term debt (included \$38,722 and \$33,065 at fair value) | 309,418 | 288,651 |
| Total liabilities^(a) | 2,266,698 | 2,104,125 |
| Commitments and contingencies (see Notes 21 and 23) | | |
| 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 | 92,103 | 92,500 |
| Retained earnings | 157,870 | 146,420 |
| Accumulated other comprehensive income | 1,474 | 192 |
| Shares held in restricted stock units ("RSU") Trust, at cost (472,953 shares) | (21) | (21) |
| Treasury stock, at cost (526,669,617 and 441,459,392 shares) | (27,268) | (21,691) |
| Total stockholders' equity | 254,331 | 247,573 |
| Total liabilities and stockholders' equity | \$ 2,521,029 | \$ 2,351,698 |

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at September 30, 2016, and December 31, 2015. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

| (in millions) | Sep 30, 2016 | Dec 31, 2015 |
|--|------------------|------------------|
| Assets | | |
| Trading assets | \$ 3,169 | \$ 3,736 |
| Loans | 76,333 | 75,104 |
| All other assets | 3,437 | 2,765 |
| Total assets | \$ 82,939 | \$ 81,605 |
| Liabilities | | |
| Beneficial interests issued by consolidated VIEs | \$ 42,233 | \$ 41,879 |
| All other liabilities | 738 | 809 |
| Total liabilities | \$ 42,971 | \$ 42,688 |

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 September 30, 2016, and December 31, 2015, the Firm provided limited program-wide credit enhancements of \$2.4 billion and \$2.0 billion respectively related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 15.

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) | Nine months ended September 30, | |
|---|---------------------------------|-------------------|
| | 2016 | 2015 |
| Preferred stock | | |
| Balance at January 1 | \$ 26,068 | \$ 20,063 |
| Issuance of preferred stock | — | 6,005 |
| Balance at September 30 | 26,068 | 26,068 |
| Common stock | | |
| Balance at January 1 and September 30 | 4,105 | 4,105 |
| Additional paid-in capital | | |
| Balance at January 1 | 92,500 | 93,270 |
| Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects | (380) | (635) |
| Other | (17) | (319) |
| Balance at September 30 | 92,103 | 92,316 |
| Retained earnings | | |
| Balance at January 1 | 146,420 | 129,977 |
| Cumulative effect of change in accounting principle | (154) | — |
| Net income | 18,006 | 19,008 |
| Dividends declared: | | |
| Preferred stock | (1,235) | (1,097) |
| Common stock (\$1.40 and \$1.28 per share) | (5,167) | (4,838) |
| Balance at September 30 | 157,870 | 143,050 |
| Accumulated other comprehensive income | | |
| Balance at January 1 | 192 | 2,189 |
| Cumulative effect of change in accounting principle | 154 | — |
| Other comprehensive income/(loss) | 1,128 | (1,438) |
| Balance at September 30 | 1,474 | 751 |
| Shares held in RSU Trust, at cost | | |
| Balance at January 1 and September 30 | (21) | (21) |
| Treasury stock, at cost | | |
| Balance at January 1 | (21,691) | (17,856) |
| Purchase of treasury stock | (6,831) | (4,397) |
| Reissuance from treasury stock | 1,254 | 1,712 |
| Balance at September 30 | (27,268) | (20,541) |
| Total stockholders' equity | \$ 254,331 | \$ 245,728 |

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) | Nine months ended September 30, | |
|---|---------------------------------|------------------|
| | 2016 | 2015 |
| Operating activities | | |
| Net income | \$ 18,006 | \$ 19,008 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | |
| Provision for credit losses | 4,497 | 2,576 |
| Depreciation and amortization | 4,032 | 3,667 |
| Deferred tax expense/(benefit) | 851 | (530) |
| Other | 1,424 | 1,410 |
| Originations and purchases of loans held-for-sale | (32,619) | (36,188) |
| Proceeds from sales, securitizations and paydowns of loans held-for-sale | 31,756 | 39,332 |
| Net change in: | | |
| Trading assets | (44,082) | 44,473 |
| Securities borrowed | (10,475) | 4,828 |
| Accrued interest and accounts receivable | (17,731) | 11,416 |
| Other assets | (6,428) | (6,229) |
| Trading liabilities | 23,308 | (6,625) |
| Accounts payable and other liabilities | 5,655 | (13,420) |
| Other operating adjustments | 3,091 | (6,419) |
| Net cash provided by/(used in) operating activities | (18,715) | 57,299 |
| Investing activities | | |
| Net change in: | | |
| Deposits with banks | (56,185) | 108,281 |
| Federal funds sold and securities purchased under resale agreements | (20,048) | (2,626) |
| Held-to-maturity securities: | | |
| Proceeds from paydowns and maturities | 4,442 | 4,790 |
| Purchases | (134) | (5,930) |
| Available-for-sale securities: | | |
| Proceeds from paydowns and maturities | 49,652 | 58,281 |
| Proceeds from sales | 34,971 | 29,303 |
| Purchases | (66,767) | (54,034) |
| Proceeds from sales and securitizations of loans held-for-investment | 8,761 | 14,634 |
| Other changes in loans, net | (65,204) | (75,891) |
| All other investing activities, net | (1,590) | 2,914 |
| Net cash provided by/(used in) investing activities | (112,102) | 79,722 |
| Financing activities | | |
| Net change in: | | |
| Deposits | 113,365 | (96,466) |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 15,797 | (11,789) |
| Commercial paper and other borrowed funds | (469) | (47,615) |
| Beneficial interests issued by consolidated VIEs | (4,767) | (1,374) |
| Proceeds from long-term borrowings | 72,021 | 70,243 |
| Payments of long-term borrowings | (51,054) | (51,382) |
| Proceeds from issuance of preferred stock | — | 5,893 |
| Treasury stock purchased | (6,831) | (4,397) |
| Dividends paid | (6,189) | (5,678) |
| All other financing activities, net | (174) | (948) |
| Net cash provided by/(used in) financing activities | 131,699 | (143,513) |
| Effect of exchange rate changes on cash and due from banks | 18 | (81) |
| Net increase/(decrease) in cash and due from banks | 900 | (6,573) |
| Cash and due from banks at the beginning of the period | 20,490 | 27,831 |
| Cash and due from banks at the end of the period | \$ 21,390 | \$ 21,258 |
| Cash interest paid | \$ 6,922 | \$ 5,624 |
| Cash income taxes paid, net | 1,810 | 6,871 |

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 businesses, commercial banking, financial transaction processing and asset management. For a discussion of the Firm’s business segments, see Note 24.

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 2015 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 VIE.

Effective January 1, 2016, the Firm adopted new accounting guidance related to the consolidation of legal entities such as limited partnerships, limited liability corporations, and securitization structures. The guidance eliminated the deferral issued by the FASB in February 2010 of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. In addition, the guidance amends

the evaluation of fees paid to a decision-maker or a service provider, and exempts certain money market funds from consolidation. Furthermore, asset management funds structured as limited partnerships or certain limited liability companies are now evaluated for consolidation as voting interest entities if the non-managing partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights) based on a simple majority vote. Accordingly, the Firm does not consolidate these voting interest entities. However, in the limited cases where the non-managing partners or members do not have substantive kick-out or participating rights, the Firm evaluates the funds as VIEs and consolidates if it is the general partner or managing member and has a potentially significant variable interest. There was no material impact on the Firm’s Consolidated Financial Statements upon adoption of this accounting guidance.

For a further description of JPMorgan Chase’s accounting policies regarding consolidation, see Notes 1 and 16 of JPMorgan Chase’s 2015 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 2015 Annual Report.

Note 2 – Business changes and developments

Increase in common stock dividend

The Board of Directors increased the Firm's quarterly common stock dividend from \$0.44 per share to \$0.48 per share, effective with the dividend paid on July 31, 2016, to stockholders of record at the close of business on July 6, 2016.

Subsequent event

On October 31, 2016, the Firm announced that it had commenced a cash tender offer (the "Offer") for any and all of the outstanding trust preferred securities issued by Chase Capital II, First Chicago NBD Capital I, Chase Capital III, Chase Capital VI, J.P. Morgan Chase Capital XIII, JPMorgan Chase Capital XXI and JPMorgan Chase Capital XXIII. The outstanding amount of the securities issued by such trusts is \$3.2 billion. The Offer is conditioned on the satisfaction of certain general conditions as described in the Offer, but is not conditioned upon any minimum amount of securities being tendered. The Offer will expire at 5:00 p.m., New York City time, on November 4, 2016, unless extended or earlier terminated.

Note 3 – 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 2015 Annual Report.

The following table presents the asset and liabilities reported at fair value as of September 30, 2016, and December 31, 2015, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

| September 30, 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 | \$ — | \$ 22,986 | \$ — | \$ — | \$ 22,986 |
| Securities borrowed | — | — | — | — | — |
| Trading assets: | | | | | |
| Debt instruments: | | | | | |
| Mortgage-backed securities: | | | | | |
| U.S. government agencies ^(a) | 5 | 35,080 | 426 | — | 35,511 |
| Residential - nonagency | — | 1,405 | 106 | — | 1,511 |
| Commercial - nonagency | — | 1,188 | 41 | — | 1,229 |
| Total mortgage-backed securities | 5 | 37,673 | 573 | — | 38,251 |
| U.S. Treasury and government agencies ^(a) | 25,668 | 6,346 | — | — | 32,014 |
| Obligations of U.S. states and municipalities | — | 7,722 | 596 | — | 8,318 |
| Certificates of deposit, bankers' acceptances and commercial paper | — | 1,527 | — | — | 1,527 |
| Non-U.S. government debt securities | 31,566 | 30,186 | 41 | — | 61,793 |
| Corporate debt securities | — | 24,458 | 500 | — | 24,958 |
| Loans ^(b) | — | 26,039 | 4,930 | — | 30,969 |
| Asset-backed securities | — | 3,390 | 326 | — | 3,716 |
| Total debt instruments | 57,239 | 137,341 | 6,966 | — | 201,546 |
| Equity securities | 91,994 | 214 | 272 | — | 92,480 |
| Physical commodities ^(c) | 4,137 | 1,857 | — | — | 5,994 |
| Other | — | 8,504 | 681 | — | 9,185 |
| Total debt and equity instruments^(d) | 153,370 | 147,916 | 7,919 | — | 309,205 |
| Derivative receivables: | | | | | |
| Interest rate | 242 | 841,029 | 2,744 | (809,416) | 34,599 |
| Credit | — | 34,003 | 1,604 | (34,797) | 810 |
| Foreign exchange | 844 | 165,197 | 993 | (150,196) | 16,838 |
| Equity | — | 37,158 | 742 | (31,041) | 6,859 |
| Commodity | 129 | 18,807 | 106 | (12,569) | 6,473 |
| Total derivative receivables^(e) | 1,215 | 1,096,194 | 6,189 | (1,038,019) | 65,579 |
| Total trading assets^(f) | 154,585 | 1,244,110 | 14,108 | (1,038,019) | 374,784 |
| Available-for-sale securities: | | | | | |
| Mortgage-backed securities: | | | | | |
| U.S. government agencies ^(a) | — | 56,822 | — | — | 56,822 |
| Residential - nonagency | — | 15,905 | 1 | — | 15,906 |
| Commercial - nonagency | — | 11,524 | — | — | 11,524 |
| Total mortgage-backed securities | — | 84,251 | 1 | — | 84,252 |
| U.S. Treasury and government agencies ^(a) | 21,477 | 31 | — | — | 21,508 |
| Obligations of U.S. states and municipalities | — | 31,403 | — | — | 31,403 |
| Certificates of deposit | — | 108 | — | — | 108 |
| Non-U.S. government debt securities | 24,748 | 12,505 | — | — | 37,253 |
| Corporate debt securities | — | 5,383 | — | — | 5,383 |
| Asset-backed securities: | | | | | |
| Collateralized loan obligations | — | 29,943 | 778 | — | 30,721 |
| Other | — | 7,674 | 2 | — | 7,676 |
| Equity securities | 2,086 | — | — | — | 2,086 |
| Total available-for-sale securities | 48,311 | 171,298 | 781 | — | 220,390 |
| Loans | — | 1,067 | 844 | — | 1,911 |
| Mortgage servicing rights | — | — | 4,937 | — | 4,937 |
| Other assets: | | | | | |
| Private equity investments ^(g) | 79 | — | 1,680 | — | 1,759 |
| All other | 4,132 | — | 685 | — | 4,817 |
| Total other assets^(h) | 4,211 | — | 2,365 | — | 6,576 |
| Total assets measured at fair value on a recurring basis | \$ 207,107 | \$ 1,439,461 | \$ 23,035 | \$ (1,038,019) | \$ 631,584 |
| Deposits | \$ — | \$ 10,362 | \$ 2,629 | \$ — | \$ 12,991 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | — | 1,436 | — | — | 1,436 |
| Other borrowed funds | — | 8,970 | 1,051 | — | 10,021 |
| Trading liabilities: | | | | | |
| Debt and equity instruments ^(d) | 74,168 | 20,903 | 55 | — | 95,126 |
| Derivative payables: | | | | | |
| Interest rate | 367 | 798,317 | 1,501 | (786,925) | 13,260 |
| Credit | — | 33,794 | 1,511 | (34,034) | 1,271 |
| Foreign exchange | 809 | 162,030 | 2,581 | (149,890) | 15,530 |
| Equity | — | 37,116 | 3,179 | (31,772) | 8,523 |
| Commodity | 173 | 20,922 | 1,000 | (12,536) | 9,559 |
| Total derivative payables^(e) | 1,349 | 1,052,179 | 9,772 | (1,015,157) | 48,143 |
| Total trading liabilities | 75,517 | 1,073,082 | 9,827 | (1,015,157) | 143,269 |
| Accounts payable and other liabilities | 7,376 | — | 14 | — | 7,390 |
| Beneficial interests issued by consolidated VIEs | — | — | 48 | — | 48 |
| Long-term debt | — | 24,993 | 13,729 | — | 38,722 |
| Total liabilities measured at fair value on a recurring basis | \$ 82,893 | \$ 1,118,843 | \$ 27,298 | \$ (1,015,157) | \$ 213,877 |

| December 31, 2015 (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 | \$ — | \$ 23,141 | \$ — | \$ — | \$ 23,141 |
| Securities borrowed | — | 395 | — | — | 395 |
| Trading assets: | | | | | |
| Debt instruments: | | | | | |
| Mortgage-backed securities: | | | | | |
| U.S. government agencies ^(a) | 6 | 31,815 | 715 | — | 32,536 |
| Residential - nonagency | — | 1,299 | 194 | — | 1,493 |
| Commercial - nonagency | — | 1,080 | 115 | — | 1,195 |
| Total mortgage-backed securities | 6 | 34,194 | 1,024 | — | 35,224 |
| U.S. Treasury and government agencies ^(a) | 12,036 | 6,985 | — | — | 19,021 |
| Obligations of U.S. states and municipalities | — | 6,986 | 651 | — | 7,637 |
| Certificates of deposit, bankers' acceptances and commercial paper | — | 1,042 | — | — | 1,042 |
| Non-U.S. government debt securities | 27,974 | 25,064 | 74 | — | 53,112 |
| Corporate debt securities | — | 22,807 | 736 | — | 23,543 |
| Loans ^(b) | — | 22,211 | 6,604 | — | 28,815 |
| Asset-backed securities | — | 2,392 | 1,832 | — | 4,224 |
| Total debt instruments | 40,016 | 121,681 | 10,921 | — | 172,618 |
| Equity securities | 94,059 | 606 | 265 | — | 94,930 |
| Physical commodities ^(c) | 3,593 | 1,064 | — | — | 4,657 |
| Other | — | 11,152 | 744 | — | 11,896 |
| Total debt and equity instruments^(d) | 137,668 | 134,503 | 11,930 | — | 284,101 |
| Derivative receivables: | | | | | |
| Interest rate | 354 | 666,491 | 2,766 | (643,248) | 26,363 |
| Credit | — | 48,850 | 2,618 | (50,045) | 1,423 |
| Foreign exchange | 734 | 177,525 | 1,616 | (162,698) | 17,177 |
| Equity | — | 35,150 | 709 | (30,330) | 5,529 |
| Commodity | 108 | 24,720 | 237 | (15,880) | 9,185 |
| Total derivative receivables^(e) | 1,196 | 952,736 | 7,946 | (902,201) | 59,677 |
| Total trading assets^(f) | 138,864 | 1,087,239 | 19,876 | (902,201) | 343,778 |
| Available-for-sale securities: | | | | | |
| Mortgage-backed securities: | | | | | |
| U.S. government agencies ^(a) | — | 55,066 | — | — | 55,066 |
| Residential - nonagency | — | 27,618 | 1 | — | 27,619 |
| Commercial - nonagency | — | 22,897 | — | — | 22,897 |
| Total mortgage-backed securities | — | 105,581 | 1 | — | 105,582 |
| U.S. Treasury and government agencies ^(a) | 10,998 | 38 | — | — | 11,036 |
| Obligations of U.S. states and municipalities | — | 33,550 | — | — | 33,550 |
| Certificates of deposit | — | 283 | — | — | 283 |
| Non-U.S. government debt securities | 23,199 | 13,477 | — | — | 36,676 |
| Corporate debt securities | — | 12,436 | — | — | 12,436 |
| Asset-backed securities: | | | | | |
| Collateralized loan obligations | — | 30,248 | 759 | — | 31,007 |
| Other | — | 9,033 | 64 | — | 9,097 |
| Equity securities | 2,087 | — | — | — | 2,087 |
| Total available-for-sale securities | 36,284 | 204,646 | 824 | — | 241,754 |
| Loans | — | 1,343 | 1,518 | — | 2,861 |
| Mortgage servicing rights | — | — | 6,608 | — | 6,608 |
| Other assets: | | | | | |
| Private equity investments ^(g) | 102 | 101 | 1,657 | — | 1,860 |
| All other | 3,815 | 28 | 744 | — | 4,587 |
| Total other assets^(f) | 3,917 | 129 | 2,401 | — | 6,447 |
| Total assets measured at fair value on a recurring basis | \$ 179,065 | \$ 1,316,893 | \$ 31,227 | \$ (902,201) | \$ 624,984 |
| Deposits | \$ — | \$ 9,566 | \$ 2,950 | \$ — | \$ 12,516 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | — | 3,526 | — | — | 3,526 |
| Other borrowed funds | — | 9,272 | 639 | — | 9,911 |
| Trading liabilities: | | | | | |
| Debt and equity instruments ^(d) | 53,845 | 20,199 | 63 | — | 74,107 |
| Derivative payables: | | | | | |
| Interest rate | 216 | 633,060 | 1,890 | (624,945) | 10,221 |
| Credit | — | 48,460 | 2,069 | (48,988) | 1,541 |
| Foreign exchange | 669 | 187,890 | 2,341 | (171,131) | 19,769 |
| Equity | — | 36,440 | 2,223 | (29,480) | 9,183 |
| Commodity | 52 | 26,430 | 1,172 | (15,578) | 12,076 |
| Total derivative payables^(e) | 937 | 932,280 | 9,695 | (890,122) | 52,790 |
| Total trading liabilities | 54,782 | 952,479 | 9,758 | (890,122) | 126,897 |
| Accounts payable and other liabilities | 4,382 | — | 19 | — | 4,401 |
| Beneficial interests issued by consolidated VIEs | — | 238 | 549 | — | 787 |
| Long-term debt | — | 21,452 | 11,613 | — | 33,065 |
| Total liabilities measured at fair value on a recurring basis | \$ 59,164 | \$ 996,533 | \$ 25,528 | \$ (890,122) | \$ 191,103 |

(a) At September 30, 2016, and December 31, 2015, included total U.S. government-sponsored enterprise obligations of \$65.0 billion and \$67.0 billion, respectively, which were predominantly mortgage-related.

(b) At September 30, 2016, and December 31, 2015, included within trading loans were \$15.3 billion and \$11.8 billion, respectively, of residential first-lien mortgages, and \$4.0 billion and \$4.3 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 \$10.1 billion and \$5.3 billion, respectively, and reverse mortgages of \$2.2 billion and \$2.5 billion, respectively.

(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" 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, market approximates fair value for

the Firm's physical commodities inventories. When fair value hedging has been applied (or when market 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 5. 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. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables and payables balances would be \$1.9 billion and \$546 million at September 30, 2016, and December 31, 2015, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.
- (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 September 30, 2016, and December 31, 2015, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were \$1.0 billion and \$1.2 billion, respectively. Included in the balances at September 30, 2016, and December 31, 2015, were trading assets of \$53 million and \$61 million, respectively, and other assets of \$985 million and \$1.2 billion, respectively.
- (g) Private equity instruments represent investments within Corporate. The portion of the private equity investment portfolio carried at fair value on a recurring basis had a cost basis of \$2.8 billion and \$3.5 billion at September 30, 2016, and December 31, 2015, respectively.

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

For the three and nine months ended September 30, 2016 and 2015, there were no individually significant transfers between levels 1 and 2, or from level 2 into level 3. In addition, during the three months ended September 30, 2016, there were no individually significant transfers from level 3 to level 2.

During the nine months ended September 30, 2016, transfers from level 3 to level 2 included \$1.3 billion of long-term debt driven by an increase in observability and a reduction of the significance in the unobservable inputs for certain structured notes.

During the three months ended September 30, 2015, transfers from level 3 into level 2 included \$2.4 billion of long-term debt driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction of the significance in the unobservable inputs for certain structured notes with embedded equity derivatives; further, \$1.1 billion of interest rate derivative receivables was transferred from level 3 to level 2 as a result of an increase in observability.

In addition, during the nine months ended September 30, 2015 transfers from level 3 into level 2 included \$2.3 billion of trading loans driven by an increase in observability of certain collateralized financing transactions; and \$2.2 billion of corporate debt driven by a reduction of the significance in the unobservable inputs and an increase in observability for certain structured products.

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 2015 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 September 30, 2016, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range presented; equity correlation inputs were concentrated at the upper end of the range; the credit correlation inputs were distributed across the range presented; and the foreign exchange correlation inputs were concentrated at the upper end of the range presented. In addition, the interest rate volatility inputs used in estimating fair value were distributed across the range presented. The equity volatilities are concentrated in the lower half end of the range. The forward commodity prices used in estimating the fair value of commodity derivatives were concentrated in the middle of the range presented.

Level 3 inputs^(a)

September 30, 2016 (in millions, except for ratios and basis points)

| Product/Instrument | Fair value | Principal valuation technique | Unobservable inputs | Range of input values | | Weighted average |
|--|------------|-------------------------------|---------------------------------|-----------------------|-------------------|------------------|
| Residential mortgage-backed securities and loans | \$ 3,103 | Discounted cash flows | Yield | 4% | - 13% | 5% |
| | | | Prepayment speed | 0% | - 20% | 9% |
| | | | Conditional default rate | 0% | - 25% | 5% |
| | | | Loss severity | 0% | - 90% | 43% |
| Commercial mortgage-backed securities and loans ^(b) | 2,205 | Discounted cash flows | Yield | 1% | - 25% | 6% |
| | | | Conditional default rate | 0% | - 100% | 67% |
| | | | Loss severity | 40% | | 40% |
| Corporate debt securities, obligations of U.S. states and municipalities, and other ^(c) | 860 | Discounted cash flows | Credit spread | 40 bps | - 375 bps | 140 bps |
| | | | Yield | 2% | - 18% | 9% |
| | 3,117 | Market comparables | Price | \$ - | - \$340 | \$ 91 |
| Net interest rate derivatives | 1,243 | Option pricing | Interest rate correlation | (34)% | - 97% | |
| | | | Interest rate spread volatility | 3% | - 38% | |
| Net credit derivatives ^{(b)(c)} | 93 | Discounted cash flows | Credit correlation | 25% | - 85% | |
| Net foreign exchange derivatives | (1,588) | Option pricing | Foreign exchange correlation | (20)% | - 70% | |
| Net equity derivatives | (2,437) | Option pricing | Equity volatility | 20% | - 60% | |
| Net commodity derivatives | (894) | Discounted cash flows | Forward commodity price | \$ 38 | - \$54 per barrel | |
| Collateralized loan obligations | 778 | Discounted cash flows | Credit spread | 370 bps | - 543 bps | 404 bps |
| | | | Prepayment speed | 20% | | 20% |
| | | | Conditional default rate | 2% | | 2% |
| | | | Loss severity | 30% | | 30% |
| | 165 | Market comparables | Price | \$ - | - \$121 | \$ 69 |
| MSRs | 4,937 | Discounted cash flows | Refer to Note 16 | | | |
| Private equity investments | 1,680 | Market comparables | EBITDA multiple | 6.4 x | - 11 x | 7.8 x |
| Long-term debt, other borrowed funds, and deposits ^(d) | 16,999 | Option pricing | Interest rate correlation | (34)% | - 97% | |
| | | | Interest rate spread volatility | 3% | - 38% | |
| | | | Foreign exchange correlation | (20)% | - 70% | |
| | | | Equity correlation | (50)% | - 75% | |
| | 410 | Discounted cash flows | Credit correlation | 25% | - 85% | |
| Beneficial interests issued by consolidated VIEs ^(e) | 48 | Discounted cash flows | Yield | 8% | - 12% | 10% |
| | | | Prepayment speed | 0% | - 3% | 1% |
| | | | Conditional default rate | 3% | - 16% | 12% |
| | | | Loss severity | 85% | - 140% | 114% |

(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.

(b) The unobservable inputs and associated input ranges for approximately \$293 million of credit derivative receivables and \$258 million of credit derivative payables with underlying commercial mortgage risk have been included in the inputs and ranges provided for commercial MBS and loans.

(c) The unobservable inputs and associated input ranges for approximately \$384 million of credit derivative receivables and \$356 million of credit derivative payables with underlying ABS risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) 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 is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(e) The parameters are related to residential MBS.

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 2015 Annual Report.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the three and nine months ended September 30, 2016 and 2015. 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.

Fair value measurements using significant unobservable inputs

| Three months ended September 30, 2016 (in millions) | Fair value at July 1, 2016 | Total realized/ unrealized gains/(losses) | Purchases ^(b) | Sales | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2016 | Change in unrealized gains/ (losses) related to financial instruments held at Sept 30, 2016 |
|---|-------------------------------|---|--------------------------|---------|----------------------------|---|--|--|
| Assets: | | | | | | | | |
| Trading assets: | | | | | | | | |
| Debt instruments: | | | | | | | | |
| Mortgage-backed securities: | | | | | | | | |
| U.S. government agencies | 473 | (4) | 4 | (22) | (31) | 6 | 426 | — |
| Residential - nonagency | 200 | (3) | 43 | (66) | (5) | (63) | 106 | 1 |
| Commercial - nonagency | 30 | — | — | (1) | (1) | 13 | 41 | — |
| Total mortgage-backed securities | 703 | (7) | 47 | (89) | (37) | (44) | 573 | 1 |
| Obligations of U.S. states and municipalities | 551 | 2 | 68 | (25) | — | — | 596 | 2 |
| Non-U.S. government debt securities | 37 | (1) | 54 | (35) | (2) | (12) | 41 | (1) |
| Corporate debt securities | 516 | 17 | 63 | (43) | (30) | (23) | 500 | (1) |
| Loans | 6,016 | 23 | 498 | (1,111) | (297) | (199) | 4,930 | 18 |
| Asset-backed securities | 959 | 18 | 133 | (173) | (40) | (571) | 326 | 13 |
| Total debt instruments | 8,782 | 52 | 863 | (1,476) | (406) | (849) | 6,966 | 32 |
| Equity securities | 246 | 21 | 42 | (35) | (2) | — | 272 | 18 |
| Other | 670 | 45 | 276 | — | (305) | (5) | 681 | 30 |
| Total trading assets - debt and equity instruments | 9,698 | 118 ^(c) | 1,181 | (1,511) | (713) | (854) | 7,919 | 80 ^(c) |
| Net derivative receivables:^(a) | | | | | | | | |
| Interest rate | 1,107 | 247 | 36 | (7) | (319) | 179 | 1,243 | 79 |
| Credit | 279 | (231) | 8 | — | 48 | (11) | 93 | (237) |
| Foreign exchange | (1,205) | 126 | — | (5) | (509) | 5 | (1,588) | (103) |
| Equity | (1,892) | (251) | 106 | (249) | 158 | (309) | (2,437) | (67) |
| Commodity | (719) | (169) | — | (9) | 10 | (7) | (894) | 1 |
| Total net derivative receivables | (2,430) | (278) ^(c) | 150 | (270) | (612) | (143) | (3,583) | (327) ^(c) |
| Available-for-sale securities: | | | | | | | | |
| Asset-backed securities | 809 | 18 | — | — | (5) | (42) | 780 | 18 |
| Other | 1 | — | — | — | — | — | 1 | — |
| Total available-for-sale securities | 810 | 18 ^(d) | — | — | (5) | (42) | 781 | 18 ^(d) |
| Loans | 785 | 7 ^(c) | 75 | — | (23) | — | 844 | 7 ^(c) |
| Mortgage servicing rights | 5,072 | (87) ^(e) | 190 | (5) | (233) | — | 4,937 | (87) ^(e) |
| Other assets: | | | | | | | | |
| Private equity investments | 1,656 | 28 ^(c) | 6 | — | (10) | — | 1,680 | 17 ^(c) |
| All other | 713 | (4) ^(f) | — | — | (24) | — | 685 | (2) ^(f) |

Fair value measurements using significant unobservable inputs

| Three months ended September 30, 2016 (in millions) | Fair value at July 1, 2016 | Total realized/ unrealized (gains)/losses | Purchases | Sales | Issuances | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2016 | Change in unrealized (gains)/ losses related to financial instruments held at Sept 30, 2016 |
|---|-------------------------------|---|-----------|-------|-----------|----------------------------|---|--|--|
| Liabilities:^(b) | | | | | | | | | |
| Deposits | \$ 2,409 | \$ 1 ^(c) | \$ — | \$ — | \$ 602 | \$ (191) | \$ (192) | \$ 2,629 | \$ (10) ^(c) |
| Other borrowed funds | 907 | (67) ^(c) | — | — | 584 | (420) | 47 | 1,051 | (48) ^(c) |
| Trading liabilities - debt and equity instruments | 57 | (4) ^(c) | (8) | 5 | — | (6) | 11 | 55 | — ^(c) |
| Accounts payable and other liabilities | 15 | — | — | — | — | (1) | — | 14 | — |
| Beneficial interests issued by consolidated VIEs | 584 | (11) ^(c) | — | — | — | (525) | — | 48 | 7 ^(c) |
| Long-term debt | 13,147 | 324 ^(c) | — | — | 1,877 | (1,432) | (187) | 13,729 | 268 ^(c) |

Fair value measurements using significant unobservable inputs

| Three months ended September 30, 2015 (in millions) | Fair value at July 1, 2015 | Total realized/ unrealized gains/(losses) | Purchases ^(b) | Sales | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2015 | Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2015 |
|---|-------------------------------|---|--------------------------|---------|----------------------------|---|--|--|
| Assets: | | | | | | | | |
| Trading assets: | | | | | | | | |
| Debt instruments: | | | | | | | | |
| Mortgage-backed securities: | | | | | | | | |
| U.S. government agencies | \$ 901 | \$ (81) | \$ 68 | \$ (21) | \$ (28) | \$ (53) | \$ 786 | \$ (79) |
| Residential - nonagency | 123 | 64 | 25 | (95) | (9) | 11 | 119 | 8 |
| Commercial - nonagency | 138 | (3) | 5 | (15) | (8) | (88) | 29 | (4) |
| Total mortgage-backed securities | 1,162 | (20) | 98 | (131) | (45) | (130) | 934 | (75) |
| Obligations of U.S. states and municipalities | 1,247 | (7) | 90 | (23) | — | (735) | 572 | (8) |
| Non-U.S. government debt securities | 208 | 11 | 18 | (7) | (1) | (143) | 86 | 18 |
| Corporate debt securities | 943 | (21) | 123 | (100) | (84) | (24) | 837 | (6) |
| Loans | 9,563 | (73) | 945 | (672) | (1,494) | (255) | 8,014 | (104) |
| Asset-backed securities | 1,539 | (15) | 485 | (207) | (10) | 14 | 1,806 | (14) |
| Total debt instruments | 14,662 | (125) | 1,759 | (1,140) | (1,634) | (1,273) | 12,249 | (189) |
| Equity securities | 310 | 9 | 26 | (15) | (2) | 7 | 335 | 9 |
| Other | 969 | (23) | 460 | (263) | (89) | (559) | 495 | (15) |
| Total trading assets - debt and equity instruments | 15,941 | (139) ^(c) | 2,245 | (1,418) | (1,725) | (1,825) | 13,079 | (195) ^(c) |
| Net derivative receivables:^(a) | | | | | | | | |
| Interest rate | 859 | 244 | 9 | (6) | (147) | (128) | 831 | 77 |
| Credit | 432 | 7 | 6 | (1) | 48 | 20 | 512 | 13 |
| Foreign exchange | 405 | (254) | 1 | (135) | (154) | (398) | (535) | (222) |
| Equity | (1,848) | 348 | 196 | (187) | 172 | (205) | (1,524) | 277 |
| Commodity | (594) | (553) | — | (2) | (100) | 29 | (1,220) | (231) |
| Total net derivative receivables | (746) | (208) ^(c) | 212 | (331) | (181) | (682) | (1,936) | (86) ^(c) |
| Available-for-sale securities: | | | | | | | | |
| Asset-backed securities | 862 | (27) | — | — | (5) | — | 830 | (26) |
| Other | 13 | — | — | — | (8) | — | 5 | — |
| Total available-for-sale securities | 875 | (27) ^(d) | — | — | (13) | — | 835 | (26) ^(d) |
| Loans | 2,295 | 9 ^(c) | 869 | — | (298) | — | 2,875 | 9 ^(c) |
| Mortgage servicing rights | 7,571 | (765) ^(e) | 143 | — | (233) | — | 6,716 | (765) ^(e) |
| Other assets: | | | | | | | | |
| Private equity investments ^(j) | 1,987 | (32) ^(c) | 70 | (267) | (58) | — | 1,700 | (32) ^(c) |
| All other ^(j) | 839 | 80 ^(f) | — | — | (100) | — | 819 | 82 ^(f) |

Fair value measurements using significant unobservable inputs

| Three months ended September 30, 2015 (in millions) | Fair value at July 1, 2015 | Total realized/ unrealized (gains)/losses | Purchases | Sales | Issuances | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2015 | Change in unrealized (gains)/losses related to financial instruments held at September 30, 2015 |
|---|-------------------------------|---|-----------|-------|-----------|----------------------------|---|--|--|
| Liabilities:^(b) | | | | | | | | | |
| Deposits | \$ 3,528 | \$ 42 ^(c) | \$ — | \$ — | \$ 327 | \$ (280) | \$ (240) | \$ 3,377 | \$ 54 ^(c) |
| Other borrowed funds ^(j) | 1,261 | (402) ^(c) | — | — | 575 | (403) | (263) | 768 | (317) ^(c) |
| Trading liabilities - debt and equity instruments | 72 | 8 ^(c) | (10) | 2 | — | (6) | 1 | 67 | 7 ^(c) |
| Accounts payable and other liabilities | 23 | — | — | — | — | (2) | — | 21 | — |
| Beneficial interests issued by consolidated VIEs ^(j) | 1,140 | (35) ^(c) | — | — | — | (87) | — | 1,018 | (36) ^(c) |
| Long-term debt | 12,589 | (420) ^(c) | (58) | — | 2,104 | (1,048) | (2,311) | 10,856 | (392) ^(c) |

| | Fair value measurements using significant unobservable inputs | | | | | | | | Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2016 |
|--|---|---|--------------------------|----------|----------------------------|---|--|----|--|
| Nine months ended September 30, 2016 (in millions) | Fair value at January 1, 2016 | Total realized/ unrealized gains/(losses) | Purchases ^(g) | Sales | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2016 | | |
| Assets: | | | | | | | | | |
| Trading assets: | | | | | | | | | |
| Debt instruments: | | | | | | | | | |
| Mortgage-backed securities: | | | | | | | | | |
| U.S. government agencies | \$ 715 | \$ (78) | \$ 133 | \$ (230) | \$ (89) | \$ (25) | \$ 426 | \$ | (78) |
| Residential - nonagency | 194 | (4) | 220 | (250) | (16) | (38) | 106 | | (3) |
| Commercial - nonagency | 115 | (6) | 65 | (29) | (1) | (103) | 41 | | 2 |
| Total mortgage-backed securities | 1,024 | (88) | 418 | (509) | (106) | (166) | 573 | | (79) |
| Obligations of U.S. states and municipalities | 651 | 11 | 104 | (132) | (38) | — | 596 | | 11 |
| Non-U.S. government debt securities | 74 | 1 | 83 | (86) | (2) | (29) | 41 | | (2) |
| Corporate debt securities | 736 | (15) | 222 | (187) | (155) | (101) | 500 | | (28) |
| Loans | 6,604 | (165) | 1,363 | (2,255) | (939) | 322 | 4,930 | | 65 |
| Asset-backed securities | 1,832 | 35 | 565 | (643) | (957) | (506) | 326 | | (7) |
| Total debt instruments | 10,921 | (221) | 2,755 | (3,812) | (2,197) | (480) | 6,966 | | (40) |
| Equity securities | 265 | 18 | 75 | (68) | (24) | 6 | 272 | | 32 |
| Other | 744 | (1) | 629 | (287) | (340) | (64) | 681 | | 73 |
| Total trading assets - debt and equity instruments | 11,930 | (204) ^(c) | 3,459 | (4,167) | (2,561) | (538) | 7,919 | | 65 ^(c) |
| Net derivative receivables: ^(a) | | | | | | | | | |
| Interest rate | 876 | 787 | 142 | (27) | (761) | 226 | 1,243 | | (167) |
| Credit | 549 | (679) | 8 | (2) | 165 | 52 | 93 | | (662) |
| Foreign exchange | (725) | (68) | 58 | (123) | (709) | (21) | (1,588) | | (291) |
| Equity | (1,514) | (615) | 248 | (571) | 231 | (216) | (2,437) | | (599) |
| Commodity | (935) | 58 | — | 9 | (30) | 4 | (894) | | (7) |
| Total net derivative receivables | (1,749) | (517) ^(c) | 456 | (714) | (1,104) | 45 | (3,583) | | (1,726) ^(c) |
| Available-for-sale securities: | | | | | | | | | |
| Asset-backed securities | 823 | 17 | — | — | (18) | (42) | 780 | | 17 |
| Other | 1 | — | — | — | — | — | 1 | | — |
| Total available-for-sale securities | 824 | 17 ^(d) | — | — | (18) | (42) | 781 | | 17 ^(d) |
| Loans | 1,518 | (7) ^(c) | 259 | — | (613) | (313) | 844 | | 38 ^(c) |
| Mortgage servicing rights | 6,608 | (1,296) ^(e) | 410 | (72) | (713) | — | 4,937 | | (1,296) ^(e) |
| Other assets: | | | | | | | | | |
| Private equity investments | 1,657 | 98 ^(c) | 447 | (427) | (95) | — | 1,680 | | 25 ^(c) |
| All other | 744 | 72 ^(f) | 30 | (11) | (150) | — | 685 | | 69 ^(f) |

| Fair value measurements using significant unobservable inputs | | | | | | | | | |
|---|-------------------------------------|---|-----------|-------|-----------|----------------------------|---|--|--|
| Nine months ended September 30, 2016 (in millions) | Fair value at January 1, 2016 | Total realized/ unrealized (gains)/losses | Purchases | Sales | Issuances | Settlements ^(b) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2016 | Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2016 |
| Liabilities: ^(b) | | | | | | | | | |
| Deposits | \$ 2,950 | \$ 76 ^(c) | — | \$ — | \$ 1,085 | \$ (868) | \$ (614) | \$ 2,629 | \$ (24) ^(c) |
| Other borrowed funds | 639 | (223) ^(c) | — | — | 1,356 | (789) | 68 | 1,051 | (113) ^(c) |
| Trading liabilities - debt and equity instruments | 63 | (11) ^(c) | (8) | 23 | — | (21) | 9 | 55 | — |
| Accounts payable and other liabilities | 19 | — | — | — | — | (5) | — | 14 | — |
| Beneficial interests issued by consolidated VIEs | 549 | (33) ^(c) | — | — | 143 | (611) | — | 48 | — ^(c) |
| Long-term debt | 11,613 | 716 ^(c) | — | — | 6,752 | (4,327) | (1,025) | 13,729 | 1,678 ^(c) |

Fair value measurements using significant unobservable inputs

| Nine months ended September 30, 2015 (in millions) | Fair value at January 1, 2015 | Total realized/ unrealized gains/(losses) | Purchases ^(a) | Sales | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2015 | Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2015 |
|--|-------------------------------------|---|--------------------------|----------|----------------------------|---|--|--|
| Assets: | | | | | | | | |
| Trading assets: | | | | | | | | |
| Debt instruments: | | | | | | | | |
| Mortgage-backed securities: | | | | | | | | |
| U.S. government agencies | \$ 922 | \$ (43) | \$ 250 | \$ (186) | \$ (102) | \$ (55) | \$ 786 | \$ (41) |
| Residential - nonagency | 663 | 108 | 202 | (558) | (19) | (277) | 119 | 7 |
| Commercial - nonagency | 306 | (12) | 185 | (215) | (22) | (213) | 29 | (5) |
| Total mortgage-backed securities | 1,891 | 53 | 637 | (959) | (143) | (545) | 934 | (39) |
| Obligations of U.S. states and municipalities | 1,273 | 6 | 281 | (133) | (27) | (828) | 572 | (7) |
| Non-U.S. government debt securities | 302 | 20 | 173 | (119) | (43) | (247) | 86 | 16 |
| Corporate debt securities | 2,989 | (71) | 944 | (909) | (119) | (1,997) | 837 | (2) |
| Loans | 13,287 | (64) | 2,841 | (3,821) | (2,313) | (1,916) | 8,014 | (254) |
| Asset-backed securities | 1,264 | (31) | 1,781 | (1,099) | (4) | (105) | 1,806 | (19) |
| Total debt instruments | 21,006 | (87) | 6,657 | (7,040) | (2,649) | (5,638) | 12,249 | (305) |
| Equity securities | 431 | 55 | 76 | (138) | (19) | (70) | 335 | 58 |
| Other | 1,052 | 65 | 1,571 | (1,298) | (305) | (590) | 495 | (25) |
| Total trading assets - debt and equity instruments | 22,489 | 33 ^(c) | 8,304 | (8,476) | (2,973) | (6,298) | 13,079 | (272) ^(c) |
| Net derivative receivables:^(a) | | | | | | | | |
| Interest rate | 626 | 737 | 451 | (164) | (500) | (319) | 831 | 310 |
| Credit | 189 | 101 | 16 | (5) | 174 | 37 | 512 | 237 |
| Foreign exchange | (526) | 691 | 14 | (146) | (140) | (428) | (535) | 222 |
| Equity | (1,785) | 673 | 620 | (859) | (90) | (83) | (1,524) | 414 |
| Commodity | (565) | (464) | — | (2) | (151) | (38) | (1,220) | (154) |
| Total net derivative receivables | (2,061) | 1,738 ^(c) | 1,101 | (1,176) | (707) | (831) | (1,936) | 1,029 ^(c) |
| Available-for-sale securities: | | | | | | | | |
| Asset-backed securities | 908 | (34) | 49 | (43) | (50) | — | 830 | (28) |
| Other | 129 | — | — | — | (25) | (99) | 5 | — |
| Total available-for-sale securities | 1,037 | (34) ^(d) | 49 | (43) | (75) | (99) | 835 | (28) ^(d) |
| Loans | 2,541 | (111) ^(c) | 1,286 | (83) | (758) | — | 2,875 | (108) ^(c) |
| Mortgage servicing rights | 7,436 | (550) ^(e) | 882 | (375) | (677) | — | 6,716 | (550) ^(e) |
| Other assets: | | | | | | | | |
| Private equity investments ⁽ⁱ⁾ | 2,225 | 15 ^(c) | 77 | (294) | (174) | (149) | 1,700 | — ^(c) |
| All other ⁽ⁱ⁾ | 959 | 90 ^(f) | 65 | (143) | (152) | — | 819 | 66 ^(f) |

Fair value measurements using significant unobservable inputs

| Nine months ended September 30, 2015 (in millions) | Fair value at January 1, 2015 | Total realized/ unrealized (gains)/losses | Purchases | Sales | Issuances | Settlements ^(h) | Transfers into and/ or out of level 3 ⁽ⁱ⁾ | Fair value at September 30, 2015 | Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2015 |
|---|-------------------------------------|---|-----------|-------|-----------|----------------------------|---|--|--|
| Liabilities:^(b) | | | | | | | | | |
| Deposits | \$ 2,859 | \$ (22) ^(c) | \$ — | \$ — | \$ 1,775 | \$ (425) | \$ (810) | \$ 3,377 | \$ 49 ^(c) |
| Other borrowed funds ⁽ⁱ⁾ | 1,453 | (525) ^(c) | — | — | 2,897 | (2,545) | (512) | 768 | (424) ^(c) |
| Trading liabilities - debt and equity instruments | 72 | 13 ^(c) | (141) | 149 | — | (20) | (6) | 67 | 7 ^(c) |
| Accounts payable and other liabilities | 26 | — | — | — | — | (5) | — | 21 | — |
| Beneficial interests issued by consolidated VIEs ⁽ⁱ⁾ | 1,146 | (52) ^(c) | — | — | 286 | (362) | — | 1,018 | (49) ^(c) |
| Long-term debt ⁽ⁱ⁾ | 11,877 | (617) ^(c) | (58) | — | 7,487 | (5,205) | (2,628) | 10,856 | (583) ^(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) were 13% at September 30, 2016 and 13% at December 31, 2015.

- (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 the three months ended September 30, 2016 and 2015, respectively, and zero and \$(7) million for the nine months ended September 30, 2016 and 2015, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were \$18 million and \$(27) million for the three months ended September 30, 2016 and 2015, respectively, and \$16 million and \$(27) million for the nine months ended September 30, 2016 and 2015, 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.
- (j) Certain prior period amounts have been revised to conform with the current period presentation. The revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

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 September 30, 2016. The following describes significant changes to level 3 assets since December 31, 2015, 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 101.

Three months ended September 30, 2016

Level 3 assets were \$23.0 billion at September 30, 2016, reflecting a decrease of \$3.0 billion from June 30, 2016 due to the following:

- \$1.8 billion decrease in trading assets – debt and equity instruments predominantly driven by a \$1.1 billion decrease in trading asset loans due to sales, and lower trading ABS due to net transfers out of level 3.
- \$1.1 billion decrease in derivative receivables largely driven by decreases in foreign exchange and equity contracts due to transfers out of level 3.

Nine months ended September 30, 2016

Level 3 assets at September 30, 2016 decreased by \$8.2 billion from December 31, 2015, due to the following:

- \$4.0 billion decrease in trading assets – debt and equity instruments driven by a \$1.7 billion decrease in trading loans due to settlements and net sales, and a \$1.5 billion decrease in ABS due to settlements and net transfers out of level 3.
- \$1.8 billion decrease in derivative receivables, largely driven by a \$1.0 billion decrease in credit derivative contracts due to market movements, and a decrease in foreign exchange derivatives largely due to transfers out of level 3.
- \$1.7 billion decrease in the fair value of MSRs. For further details see Note 16

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 96–100.

Three months ended September 30, 2016

- \$198 million of net losses on assets and \$243 million of net losses on liabilities, none of which were individually significant.

Three months ended September 30, 2015

- \$1.1 billion of net losses on assets of which \$765 million was on MSRs. For more information, see Note 16.
- \$807 million of net loss on liabilities none of which were individually significant

Nine months ended September 30, 2016

- \$1.8 billion of net losses on assets largely driven by \$1.3 billion loss on MSRs. For further details see Note 16.
- \$525 million of net losses on liabilities, none of which were individually significant.

Nine months ended September 30, 2015

- \$1.7 billion gain on derivative receivables due to gains on interest rate, foreign exchange and equity derivatives driven by market movements, partially offset by losses from sales of commodity derivatives.
- \$1.2 billion loss on liabilities due to losses on other borrowed funds and long-term debt due to market movements, partially offset by gains from the sale of long term debt.

Credit & funding adjustments – derivatives

Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters generally do not consider factors such as counterparty nonperformance risk, the Firm's own credit quality, and funding costs. Therefore, it is generally necessary to make adjustments to the base estimate of fair value to reflect these factors.

CVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect counterparty nonperformance risk. The Firm estimates CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of

offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated credit default swaps (“CDS”) spreads; and (iii) estimated recovery rates implied by CDS spreads, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.

DVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect the credit quality of the Firm. The derivative DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase’s credit spread as observed through the CDS market to estimate the PD and LGD as a result of a systemic event affecting the Firm.

FVA represents the adjustment to reflect the impact of funding and is recognized where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. The Firm’s FVA framework, applied to uncollateralized (including partially collateralized) over-the-counter (“OTC”) derivatives, leverages its existing CVA and DVA calculation methodologies, and considers the fact that the Firm’s own credit risk is a significant component of funding costs. The key inputs to FVA are: (i) the expected funding requirements arising from the Firm’s positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with a similar credit standing as the Firm. For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap rate given the underlying collateral agreement with the counterparty, and therefore a separate FVA is not necessary.

The following table provides the impact of credit and funding adjustments on principal transactions revenue 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 September 30, | | Nine months ended September 30, | |
|-------------------------|-------------------------------------|----------|------------------------------------|--------|
| | 2016 | 2015 | 2016 | 2015 |
| Credit adjustments: | | | | |
| Derivatives CVA | \$ 97 | \$ (127) | \$ (659) | \$ 395 |
| Derivatives DVA and FVA | (154) | (121) | (277) | (58) |

Valuation adjustments on fair value option elected liabilities

The valuation of the Firm’s liabilities for which the fair value option has been elected requires consideration of the Firm’s own credit risk. DVA on fair value option elected liabilities is measured using (i) the current fair value of the liability and (ii) changes (subsequent to the issuance of the liability) in the Firm’s PD and LGD, which are estimated based on changes in the Firm’s credit spread observed in the bond market. Effective January 1, 2016, the effect of DVA on fair value option elected liabilities is recognized in OCI. See Note 19 for further information.

Assets and liabilities measured at fair value on a nonrecurring basis

At September 30, 2016 and 2015, assets measured at fair value on a nonrecurring basis were \$1.1 billion and \$2.3 billion, respectively, which predominantly consisted of loans that had fair value adjustments in the first nine months of both 2016 and 2015. At September 30, 2016, \$281 million and \$784 million of these loans were classified in levels 2 and 3 of the fair value hierarchy, respectively. At September 30, 2015, \$1.5 billion and \$867 million of these loans were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at September 30, 2016 and 2015. For the nine months ended September 30, 2016 there were no significant transfers between levels 1, 2 and 3 related to assets held at the balance sheet date.

Of the \$784 million of level 3 assets measured at fair value on a nonrecurring basis as of September 30, 2016:

- \$354 million related to residential real estate loans measured 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 8% to 52% with a weighted average of 23%.

The total change in the recorded value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the three months ended September 30, 2016 and 2015, related to financial instruments held at those dates, was a loss of \$28 million and \$66 million, respectively and for the nine months ended September 30, 2016 and 2015, was a loss of \$181 million and \$170 million, respectively.

For 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 2015 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 the carrying values and estimated fair values at September 30, 2016, and December 31, 2015, of financial assets and liabilities, excluding financial instruments which 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 2015 Annual Report.

| | September 30, 2016 | | | | | December 31, 2015 | | | | |
|--|--------------------------------|---------|------------|---------|----------------------------|--------------------------------|---------|------------|---------|----------------------------|
| | Estimated fair value hierarchy | | | | | Estimated fair value hierarchy | | | | |
| (in billions) | Carrying value | Level 1 | Level 2 | Level 3 | Total estimated fair value | Carrying value | Level 1 | Level 2 | Level 3 | Total estimated fair value |
| Financial assets | | | | | | | | | | |
| Cash and due from banks | \$ 21.4 | \$ 21.4 | \$ — | \$ — | \$ 21.4 | \$ 20.5 | \$ 20.5 | \$ — | \$ — | \$ 20.5 |
| Deposits with banks | 396.2 | 391.7 | 4.5 | — | 396.2 | 340.0 | 335.9 | 4.1 | — | 340.0 |
| Accrued interest and accounts receivable | 64.3 | — | 64.2 | 0.1 | 64.3 | 46.6 | — | 46.4 | 0.2 | 46.6 |
| Federal funds sold and securities purchased under resale agreements | 209.6 | — | 209.1 | 0.5 | 209.6 | 189.5 | — | 189.5 | — | 189.5 |
| Securities borrowed | 109.2 | — | 109.2 | — | 109.2 | 98.3 | — | 98.3 | — | 98.3 |
| Securities, held-to-maturity ^(a) | 52.0 | — | 54.7 | — | 54.7 | 49.1 | — | 50.6 | — | 50.6 |
| Loans, net of allowance for loan losses ^(b) | 872.0 | — | 25.1 | 851.9 | 877.0 | 820.8 | — | 25.4 | 802.7 | 828.1 |
| Other | 67.5 | 0.2 | 57.1 | 14.9 | 72.2 | 66.0 | 0.1 | 56.3 | 14.3 | 70.7 |
| Financial liabilities | | | | | | | | | | |
| Deposits | \$ 1,363.1 | \$ — | \$ 1,363.2 | \$ — | \$ 1,363.2 | \$ 1,267.2 | \$ — | \$ 1,266.1 | \$ 1.2 | \$ 1,267.3 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 167.1 | — | 167.1 | — | 167.1 | 149.2 | — | 149.2 | — | 149.2 |
| Commercial paper | 12.3 | — | 12.3 | — | 12.3 | 15.6 | — | 15.6 | — | 15.6 |
| Other borrowed funds | 14.5 | — | 14.5 | — | 14.5 | 11.2 | — | 11.2 | — | 11.2 |
| Accounts payable and other liabilities | 156.3 | — | 153.2 | 2.9 | 156.1 | 144.6 | — | 141.7 | 2.8 | 144.5 |
| Beneficial interests issued by consolidated VIEs ^(c) | 42.2 | — | 42.3 | — | 42.3 | 41.1 | — | 40.2 | 0.9 | 41.1 |
| Long-term debt and junior subordinated deferrable interest debentures ^(d) | 270.7 | — | 271.7 | 2.0 | 273.7 | 255.6 | — | 257.4 | 4.3 | 261.7 |

(a) Carrying value reflects unamortized discount or premium.

(b) 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 185-188 of JPMorgan Chase's 2015 Annual Report.

(c) Carrying value reflects unamortized issuance costs.

(d) Carrying value reflects unamortized premiums and discounts, issuance costs, and other valuation adjustments.

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 allowance and the estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

| (in billions) | September 30, 2016 | | | | | December 31, 2015 | | | | |
|---------------------------------------|--------------------------------|---------|---------|---------|----------------------------|--------------------------------|---------|---------|---------|----------------------------|
| | Estimated fair value hierarchy | | | | Total estimated fair value | Estimated fair value hierarchy | | | | Total estimated fair value |
| | Carrying value ^(a) | Level 1 | Level 2 | Level 3 | | Carrying value ^(a) | Level 1 | Level 2 | Level 3 | |
| Wholesale lending-related commitments | \$ 1.1 | \$ — | \$ — | \$ 2.4 | \$ 2.4 | \$ 0.8 | \$ — | \$ — | \$ 3.0 | \$ 3.0 |

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of 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 186 of JPMorgan Chase's 2015 Annual Report.

Note 4 – 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 2015 Annual Report.

Changes in fair value under the fair value option election

The following tables presents the changes in fair value included in the Consolidated statements of income for the three and nine months ended September 30, 2016 and 2015, 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 September 30, | | | | | |
|--|----------------------------------|--------------------|--------------------------------------|------------------------|--------------------|--------------------------------------|
| | 2016 | | | 2015 | | |
| | 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 ^(a) | \$ (54) | \$ – | \$ (54) | \$ 63 | \$ – | \$ 63 |
| Securities borrowed ^(a) | – | – | – | (1) | – | (1) |
| Trading assets: | | | | | | |
| Debt and equity instruments, excluding loans | 256 | – | 256 | (144) | – | (144) |
| Loans reported as trading assets ^(b) : | | | | | | |
| Changes in instrument-specific credit risk | 286 | 10 ^(e) | 296 | 12 | 5 ^(e) | 17 |
| Other changes in fair value | 2 | 452 ^(e) | 454 | 94 | 277 ^(e) | 371 |
| Loans ^(b) : | | | | | | |
| Changes in instrument-specific credit risk | – | – | – | 31 | – | 31 |
| Other changes in fair value | 1 | – | 1 | 2 | – | 2 |
| Other assets | 2 | (3) ^(f) | (1) | 54 | – | 54 |
| Deposits ^(c) | 38 | – | 38 | (112) | – | (112) |
| Federal funds purchased and securities loaned or sold under repurchase agreements ^(a) | 4 | – | 4 | (14) | – | (14) |
| Other borrowed funds ^(c) | (291) | – | (291) | 2,015 | – | 2,015 |
| Trading liabilities | 3 | – | 3 | (6) | – | (6) |
| Beneficial interests issued by consolidated VIEs | – | – | – | 29 | – | 29 |
| Long-term debt: | | | | | | |
| DVA on fair value option elected liabilities ^(c) | – | – | – | 299 | – | 299 |
| Other changes in fair value ^(d) | (619) | – | (619) | 1,116 | – | 1,116 |

Nine months ended September 30,

| (in millions) | 2016 | | | 2015 | | |
|--|------------------------|--------------------|--------------------------------------|------------------------|--------------------|--------------------------------------|
| | 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 ^(a) | \$ 14 | \$ — | \$ 14 | \$ 37 | \$ — | \$ 37 |
| Securities borrowed ^(a) | 1 | — | 1 | (5) | — | (5) |
| Trading assets: | | | | | | |
| Debt and equity instruments, excluding loans | 143 | — | 143 | 375 | 1 | 376 |
| Loans reported as trading assets ^(b) : | | | | | | |
| Changes in instrument-specific credit risk | 384 | 24 ^(e) | 408 | 223 | 18 ^(e) | 241 |
| Other changes in fair value | 188 | 975 ^(e) | 1,163 | 206 | 657 ^(e) | 863 |
| Loans ^(b) : | | | | | | |
| Changes in instrument-specific credit risk | 13 | — | 13 | 32 | — | 32 |
| Other changes in fair value | 5 | — | 5 | 2 | — | 2 |
| Other assets | 16 | 79 ^(f) | 95 | 116 | 9 ^(f) | 125 |
| Deposits ^(c) | (531) | — | (531) | (75) | — | (75) |
| Federal funds purchased and securities loaned or sold under repurchase agreements ^(a) | (16) | — | (16) | (5) | — | (5) |
| Other borrowed funds ^(c) | (292) | — | (292) | 2,121 | — | 2,121 |
| Trading liabilities | 5 | — | 5 | (20) | — | (20) |
| Beneficial interests issued by consolidated VIEs | 23 | — | 23 | 73 | — | 73 |
| Long-term debt: | | | | | | |
| DVA on fair value option elected liabilities ^(c) | — | — | — | 624 | — | 624 |
| Other changes in fair value ^(d) | (1,537) | — | (1,537) | 1,466 | — | 1,466 |

- (a) Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.
- (b) Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- (c) Effective January 1, 2016, 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. DVA for the three and nine months ended September 30, 2015 was included in principal transactions revenue, and 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 subsequent to issuance. See Notes 3 and 19 for further information.
- (d) Long-term debt measured at fair value predominantly relate to structured notes containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk. 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.
- (e) Reported in mortgage fees and related income.
- (f) 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 September 30, 2016, and December 31, 2015, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

| (in millions) | September 30, 2016 | | | December 31, 2015 | | |
|---|-----------------------------------|------------------|--|-----------------------------------|------------------|--|
| | 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 | \$ 3,157 | \$ 719 | \$ (2,438) | \$ 3,484 | \$ 631 | \$ (2,853) |
| Loans | 7 | 7 | — | 7 | 7 | — |
| Subtotal | 3,164 | 726 | (2,438) | 3,491 | 638 | (2,853) |
| All other performing loans | | | | | | |
| Loans reported as trading assets | 32,158 | 30,250 | (1,908) | 30,780 | 28,184 | (2,596) |
| Loans | 1,875 | 1,867 | (8) | 2,771 | 2,752 | (19) |
| Total loans | \$ 37,197 | \$ 32,843 | \$ (4,354) | \$ 37,042 | \$ 31,574 | \$ (5,468) |
| Long-term debt | | | | | | |
| Principal-protected debt | \$ 21,307 ^(c) | \$ 19,471 | \$ (1,836) | \$ 17,910 ^(c) | \$ 16,611 | \$ (1,299) |
| Nonprincipal-protected debt ^(b) | NA | 19,251 | NA | NA | 16,454 | NA |
| Total long-term debt | NA | \$ 38,722 | NA | NA | \$ 33,065 | NA |
| Long-term beneficial interests | | | | | | |
| Nonprincipal-protected debt | NA | \$ 48 | NA | NA | \$ 787 | NA |
| Total long-term beneficial interests | NA | \$ 48 | NA | NA | \$ 787 | NA |

(a) There were no performing loans that were ninety days or more past due as of September 30, 2016, and December 31, 2015, 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 September 30, 2016, and December 31, 2015, the contractual amount of letters of credit for which the fair value option was elected was \$4.6 billion and \$4.6 billion, respectively, with a corresponding fair value of \$(86) million and \$(94) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29 of JPMorgan Chase's 2015 Annual Report, and Note 21 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) | September 30, 2016 | | | | December 31, 2015 | | | |
|-------------------------------|--------------------|----------------------|------------------|------------------|-------------------|----------------------|------------------|------------------|
| | Long-term debt | Other borrowed funds | Deposits | Total | Long-term debt | Other borrowed funds | Deposits | Total |
| Risk exposure | | | | | | | | |
| Interest rate | \$ 16,393 | \$ 322 | \$ 3,536 | \$ 20,251 | \$ 12,531 | \$ 58 | \$ 3,340 | \$ 15,929 |
| Credit | 3,509 | 666 | — | 4,175 | 3,195 | 547 | — | 3,742 |
| Foreign exchange | 2,571 | 150 | 6 | 2,727 | 1,765 | 77 | 11 | 1,853 |
| Equity | 15,116 | 8,527 | 5,459 | 29,102 | 14,293 | 8,447 | 4,993 | 27,733 |
| Commodity | 607 | 55 | 1,572 | 2,234 | 640 | 50 | 1,981 | 2,671 |
| Total structured notes | \$ 38,196 | \$ 9,720 | \$ 10,573 | \$ 58,489 | \$ 32,424 | \$ 9,179 | \$ 10,325 | \$ 51,928 |

Note 5 – 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 2015 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 | 112 |
| ◦ Interest rate | Hedge floating-rate assets and liabilities | Cash flow hedge | Corporate | 113 |
| ◦ Foreign exchange | Hedge foreign currency-denominated assets and liabilities | Fair value hedge | Corporate | 112 |
| ◦ Foreign exchange | Hedge forecasted revenue and expense | Cash flow hedge | Corporate | 113 |
| ◦ Foreign exchange | Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities | Net investment hedge | Corporate | 114 |
| ◦ Commodity | Hedge commodity inventory | Fair value hedge | CIB | 112 |
| Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships: | | | | |
| ◦ Interest rate | Manage the risk of the mortgage pipeline, warehouse loans and MSRs | Specified risk management | CCB | 114 |
| ◦ Credit | Manage the credit risk of wholesale lending exposures | Specified risk management | CIB | 114 |
| ◦ Commodity | Manage the risk of certain commodities-related contracts and investments | Specified risk management | CIB | 114 |
| ◦ Interest rate and foreign exchange | Manage the risk of certain other specified assets and liabilities | Specified risk management | Corporate | 114 |
| Market-making derivatives and other activities: | | | | |
| ◦ Various | Market-making and related risk management | Market-making and other | CIB | 114 |
| ◦ Various | Other derivatives | Market-making and other | CIB, Corporate | 114 |

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of September 30, 2016, and December 31, 2015.

| (in billions) | Notional amounts ^(b) | |
|--|---------------------------------|----------------------|
| | September 30, 2016 | December 31, 2015 |
| Interest rate contracts | | |
| Swaps | \$ 23,419 | \$ 24,162 |
| Futures and forwards | 6,073 | 5,167 |
| Written options | 3,091 | 3,506 |
| Purchased options | 3,544 | 3,896 |
| Total interest rate contracts | 36,127 | 36,731 |
| Credit derivatives^(a) | 2,545 | 2,900 |
| Foreign exchange contracts | | |
| Cross-currency swaps | 3,485 | 3,199 |
| Spot, futures and forwards | 6,087 | 5,028 |
| Written options | 756 | 690 |
| Purchased options | 751 | 706 |
| Total foreign exchange contracts | 11,079 | 9,623 |
| Equity contracts | | |
| Swaps | 274 | 232 |
| Futures and forwards | 65 | 43 |
| Written options | 491 | 395 |
| Purchased options | 430 | 326 |
| Total equity contracts | 1,260 | 996 |
| Commodity contracts | | |
| Swaps | 92 | 83 |
| Spot, futures and forwards | 149 | 99 |
| Written options | 103 | 115 |
| Purchased options | 108 | 112 |
| Total commodity contracts | 452 | 409 |
| Total derivative notional amounts | \$ 51,463 | \$ 50,659 |

(a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on page 115.

(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 September 30, 2016, and December 31, 2015, 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)

| September 30, 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 | \$ 836,839 | \$ 7,174 | \$ 844,013 | \$ 34,599 | \$ 796,860 | \$ 3,326 | \$ 800,186 | \$ 13,260 |
| Credit | 35,607 | — | 35,607 | 810 | 35,305 | — | 35,305 | 1,271 |
| Foreign exchange | 166,547 | 488 | 167,035 | 16,838 | 164,385 | 1,035 | 165,420 | 15,530 |
| Equity | 37,901 | — | 37,901 | 6,859 | 40,294 | — | 40,294 | 8,523 |
| Commodity | 18,909 | 133 | 19,042 | 6,473 | 21,975 | 120 | 22,095 | 9,559 |
| Total fair value of trading assets and liabilities | \$ 1,095,803 | \$ 7,795 | \$ 1,103,598 | \$ 65,579 | \$ 1,058,819 | \$ 4,481 | \$ 1,063,300 | \$ 48,143 |

| December 31, 2015 (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 | \$ 665,531 | \$ 4,080 | \$ 669,611 | \$ 26,363 | \$ 632,928 | \$ 2,238 | \$ 635,166 | \$ 10,221 |
| Credit | 51,468 | — | 51,468 | 1,423 | 50,529 | — | 50,529 | 1,541 |
| Foreign exchange | 179,072 | 803 | 179,875 | 17,177 | 189,397 | 1,503 | 190,900 | 19,769 |
| Equity | 35,859 | — | 35,859 | 5,529 | 38,663 | — | 38,663 | 9,183 |
| Commodity | 23,713 | 1,352 | 25,065 | 9,185 | 27,653 | 1 | 27,654 | 12,076 |
| Total fair value of trading assets and liabilities | \$ 955,643 | \$ 6,235 | \$ 961,878 | \$ 59,677 | \$ 939,170 | \$ 3,742 | \$ 942,912 | \$ 52,790 |

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 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 September 30, 2016, and December 31, 2015, 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.
- 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) | September 30, 2016 | | | December 31, 2015 | | |
|---|------------------------------|---|----------------------------|------------------------------|---|----------------------------|
| | 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: | | | | | | |
| OTC | \$ 489,501 | \$ (461,990) | \$ 27,511 | \$ 417,386 | \$ (396,506) | \$ 20,880 |
| OTC-cleared | 347,445 | (347,371) | 74 | 246,750 | (246,742) | 8 |
| Exchange-traded ^(a) | 184 | (55) | 129 | — | — | — |
| Total interest rate contracts | 837,130 | (809,416) | 27,714 | 664,136 | (643,248) | 20,888 |
| Credit contracts: | | | | | | |
| OTC | 28,304 | (27,993) | 311 | 44,082 | (43,182) | 900 |
| OTC-cleared | 6,822 | (6,804) | 18 | 6,866 | (6,863) | 3 |
| Total credit contracts | 35,126 | (34,797) | 329 | 50,948 | (50,045) | 903 |
| Foreign exchange contracts: | | | | | | |
| OTC | 162,056 | (149,376) | 12,680 | 175,060 | (162,377) | 12,683 |
| OTC-cleared | 1,033 | (801) | 232 | 323 | (321) | 2 |
| Exchange-traded ^(a) | 95 | (19) | 76 | — | — | — |
| Total foreign exchange contracts | 163,184 | (150,196) | 12,988 | 175,383 | (162,698) | 12,685 |
| Equity contracts: | | | | | | |
| OTC | 21,758 | (20,056) | 1,702 | 20,690 | (20,439) | 251 |
| OTC-cleared | — | — | — | — | — | — |
| Exchange-traded ^(a) | 14,611 | (10,985) | 3,626 | 12,285 | (9,891) | 2,394 |
| Total equity contracts | 36,369 | (31,041) | 5,328 | 32,975 | (30,330) | 2,645 |
| Commodity contracts: | | | | | | |
| OTC | 10,939 | (5,168) | 5,771 | 15,001 | (6,772) | 8,229 |
| OTC-cleared | — | — | — | — | — | — |
| Exchange-traded ^(a) | 7,686 | (7,401) | 285 | 9,199 | (9,108) | 91 |
| Total commodity contracts | 18,625 | (12,569) | 6,056 | 24,200 | (15,880) | 8,320 |
| Derivative receivables with appropriate legal opinion | 1,090,434 | (1,038,019) ^(b) | 52,415 | 947,642 | (902,201) ^(b) | 45,441 |
| Derivative receivables where an appropriate legal opinion has not been either sought or obtained | 13,164 | | 13,164 | 14,236 | | 14,236 |
| Total derivative receivables recognized on the Consolidated balance sheets | \$ 1,103,598 | | \$ 65,579 | \$ 961,878 | | \$ 59,677 |
| Collateral not nettable on the Consolidated balance sheets ^{(c)(d)} | | | (16,178) | | | (13,543) |
| Net amounts | | | \$ 49,401 | | | \$ 46,134 |

| (in millions) | September 30, 2016 | | | December 31, 2015 | | |
|--|---------------------------|---|-------------------------|---------------------------|---|-------------------------|
| | 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 | \$ 456,267 | \$ (444,852) | \$ 11,415 | \$ 393,709 | \$ (384,576) | \$ 9,133 |
| OTC-cleared | 342,194 | (342,018) | 176 | 240,398 | (240,369) | 29 |
| Exchange-traded ^(a) | 82 | (55) | 27 | — | — | — |
| Total interest rate contracts | 798,543 | (786,925) | 11,618 | 634,107 | (624,945) | 9,162 |
| Credit contracts: | | | | | | |
| OTC | 28,174 | (27,400) | 774 | 44,379 | (43,019) | 1,360 |
| OTC-cleared | 6,634 | (6,634) | — | 5,969 | (5,969) | — |
| Total credit contracts | 34,808 | (34,034) | 774 | 50,348 | (48,988) | 1,360 |
| Foreign exchange contracts: | | | | | | |
| OTC | 159,983 | (149,151) | 10,832 | 185,178 | (170,830) | 14,348 |
| OTC-cleared | 723 | (723) | — | 301 | (301) | — |
| Exchange-traded ^(a) | 312 | (16) | 296 | — | — | — |
| Total foreign exchange contracts | 161,018 | (149,890) | 11,128 | 185,479 | (171,131) | 14,348 |
| Equity contracts: | | | | | | |
| OTC | 25,339 | (20,858) | 4,481 | 23,458 | (19,589) | 3,869 |
| OTC-cleared | — | — | — | — | — | — |
| Exchange-traded ^(a) | 11,625 | (10,914) | 711 | 10,998 | (9,891) | 1,107 |
| Total equity contracts | 36,964 | (31,772) | 5,192 | 34,456 | (29,480) | 4,976 |
| Commodity contracts: | | | | | | |
| OTC | 13,015 | (5,061) | 7,954 | 16,953 | (6,256) | 10,697 |
| OTC-cleared | — | — | — | — | — | — |
| Exchange-traded ^(a) | 7,704 | (7,475) | 229 | 9,374 | (9,322) | 52 |
| Total commodity contracts | 20,719 | (12,536) | 8,183 | 26,327 | (15,578) | 10,749 |
| Derivative payables with appropriate legal opinions | 1,052,052 | (1,015,157) ^(b) | 36,895 | 930,717 | (890,122) ^(b) | 40,595 |
| Derivative payables where an appropriate legal opinion has not been either sought or obtained | 11,248 | | 11,248 | 12,195 | | 12,195 |
| Total derivative payables recognized on the Consolidated balance sheets | \$ 1,063,300 | | \$ 48,143 | \$ 942,912 | | \$ 52,790 |
| Collateral not nettable on the Consolidated balance sheets ^{(c)(d)(e)} | | | (10,121) | | | (7,957) |
| Net amounts | | | \$ 38,022 | | | \$ 44,833 |

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

(b) Net derivatives receivable included cash collateral netted of \$88.5 billion and \$73.7 billion at September 30, 2016, and December 31, 2015, respectively. Net derivatives payable included cash collateral netted of \$65.6 billion and \$61.6 billion related to OTC and OTC-cleared derivatives at September 30, 2016, and December 31, 2015, 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 2015 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 September 30, 2016, and December 31, 2015.

OTC and OTC-cleared derivative payables containing downgrade triggers

| (in millions) | September 30, 2016 | December 31, 2015 |
|---|-----------------------|----------------------|
| Aggregate fair value of net derivative payables | \$ 23,174 | \$ 22,328 |
| Collateral posted | 20,327 | 18,942 |

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 September 30, 2016, and December 31, 2015, 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) | September 30, 2016 | | December 31, 2015 | |
|---|---------------------------|------------------------|---------------------------|------------------------|
| | Single-notch downgrade | Two-notch downgrade | Single-notch downgrade | Two-notch downgrade |
| Amount of additional collateral to be posted upon downgrade ^(a) | \$ 419 | \$ 2,381 | \$ 807 | \$ 3,028 |
| Amount required to settle contracts with termination triggers upon downgrade ^(b) | 303 | 809 | 271 | 1,093 |

(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 12, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding at September 30, 2016 was 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 and nine months ended September 30, 2016 and 2015, respectively.

| Three months ended September 30, 2016 (in millions) | Gains/(losses) recorded in income | | | Income statement impact due to: | |
|--|-----------------------------------|---------------|-------------------------------|--------------------------------------|------------------------------------|
| | Derivatives | Hedged items | Total income statement impact | Hedge ineffectiveness ^(d) | Excluded components ^(e) |
| Contract type | | | | | |
| Interest rate ^(a) | \$ (232) | \$ 430 | \$ 198 | \$ 7 | \$ 191 |
| Foreign exchange ^(b) | (143) | 194 | 51 | — | 51 |
| Commodity ^(c) | (203) | 229 | 26 | 1 | 25 |
| Total | \$ (578) | \$ 853 | \$ 275 | \$ 8 | \$ 267 |

| Three months ended September 30, 2015 (in millions) | Gains/(losses) recorded in income | | | Income statement impact due to: | |
|--|-----------------------------------|-------------------|-------------------------------|--------------------------------------|------------------------------------|
| | Derivatives | Hedged items | Total income statement impact | Hedge ineffectiveness ^(d) | Excluded components ^(e) |
| Contract type | | | | | |
| Interest rate ^(a) | \$ 1,298 | \$ (1,071) | \$ 227 | \$ 8 | \$ 219 |
| Foreign exchange ^(b) | 1,012 | (998) | 14 | — | 14 |
| Commodity ^(c) | 303 | (271) | 32 | (3) | 35 |
| Total | \$ 2,613 | \$ (2,340) | \$ 273 | \$ 5 | \$ 268 |

| Nine months ended September 30, 2016 (in millions) | Gains/(losses) recorded in income | | | Income statement impact due to: | |
|---|-----------------------------------|-------------------|-------------------------------|--------------------------------------|------------------------------------|
| | Derivatives | Hedged items | Total income statement impact | Hedge ineffectiveness ^(d) | Excluded components ^(e) |
| Contract type | | | | | |
| Interest rate ^(a) | \$ 2,049 | \$ (1,478) | \$ 571 | \$ 36 | \$ 535 |
| Foreign exchange ^(b) | 46 | 104 | 150 | — | 150 |
| Commodity ^(c) | (276) | 307 | 31 | (11) | 42 |
| Total | \$ 1,819 | \$ (1,067) | \$ 752 | \$ 25 | \$ 727 |

| Nine months ended September 30, 2015 (in millions) | Gains/(losses) recorded in income | | | Income statement impact due to: | |
|---|-----------------------------------|-------------------|-------------------------------|--------------------------------------|------------------------------------|
| | Derivatives | Hedged items | Total income statement impact | Hedge ineffectiveness ^(d) | Excluded components ^(e) |
| Contract type | | | | | |
| Interest rate ^(a) | \$ 363 | \$ 390 | \$ 753 | \$ 6 | \$ 747 |
| Foreign exchange ^(b) | 5,369 | (5,360) | 9 | — | 9 |
| Commodity ^(c) | 867 | (874) | (7) | (14) | 7 |
| Total | \$ 6,599 | \$ (5,844) | \$ 755 | \$ (8) | \$ 763 |

- (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) 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.
- (c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.
- (d) 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.
- (e) 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 and nine months ended September 30, 2016 and 2015, 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 September 30, 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) | \$ (18) | \$ — | \$ (18) | \$ 22 | \$ 40 |
| Foreign exchange ^(b) | (104) | — | (104) | (86) | 18 |
| Total | \$ (122) | \$ — | \$ (122) | \$ (64) | \$ 58 |

| Three months ended September 30, 2015 (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) | \$ 14 | \$ — | \$ 14 | \$ (70) | \$ (84) |
| Foreign exchange ^(b) | (19) | — | (19) | (105) | (86) |
| Total | \$ (5) | \$ — | \$ (5) | \$ (175) | \$ (170) |

| Nine months ended September 30, 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) | \$ (58) | \$ — | \$ (58) | \$ (78) | \$ (20) |
| Foreign exchange ^(b) | (167) | — | (167) | (340) | (173) |
| Total | \$ (225) | \$ — | \$ (225) | \$ (418) | \$ (193) |

| Nine months ended September 30, 2015 (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) | \$ (113) | \$ — | \$ (113) | \$ (90) | \$ 23 |
| Foreign exchange ^(b) | (74) | — | (74) | (14) | 60 |
| Total | \$ (187) | \$ — | \$ (187) | \$ (104) | \$ 83 |

(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, and for the forecasted transactions that the Firm determined during the nine months ended September 30, 2015, were probable of not occurring, in other income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item - primarily noninterest revenue and compensation expense.

(c) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

The Firm did not experience any forecasted transactions that failed to occur for the three and nine months ended September 30, 2016. In the first quarter of 2015, the Firm reclassified approximately \$150 million of net losses from AOCI to other income because the Firm determined that it was probable that the forecasted interest payment cash flows would not occur as a result of the planned reduction in wholesale non-operating deposits.

Over the next 12 months, the Firm expects that approximately \$196 million (after-tax) of net losses recorded in AOCI at September 30, 2016, 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 7 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 and nine months ended September 30, 2016 and 2015.

| Three months ended September 30, (in millions) | Gains/(losses) recorded in income and other comprehensive income/(loss) | | | |
|--|---|-----------------------------------|--|-----------------------------------|
| | 2016 | | 2015 | |
| | 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 | \$ (69) | \$ (30) | \$ (103) | \$ 908 |

| Nine months ended September 30, (in millions) | Gains/(losses) recorded in income and other comprehensive income/(loss) | | | |
|---|---|-----------------------------------|--|-----------------------------------|
| | 2016 | | 2015 | |
| | 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 | \$ (219) | \$ (603) | \$ (292) | \$ 1,651 |

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in other income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and, therefore, there was no significant ineffectiveness for net investment hedge accounting relationships during the three and nine months ended September 30, 2016 and 2015.

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 September 30, | | Nine months ended September 30, | |
| | 2016 | 2015 | 2016 | 2015 |
| Contract type | | | | |
| Interest rate ^(a) | \$ 312 | \$ 665 | \$ 1,956 | \$ 785 |
| Credit ^(b) | (84) | 76 | (244) | 52 |
| Foreign exchange ^(c) | (2) | 26 | (2) | 21 |
| Commodity ^(d) | — | — | — | (13) |
| Total | \$ 226 | \$ 767 | \$ 1,710 | \$ 845 |

- (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.
- (d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. 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 6 for information on principal transactions revenue.

Credit derivatives

For a more detailed discussion of credit derivatives, see Note 6 of JPMorgan Chase's 2015 Annual Report. The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

| | Maximum payout/Notional amount | | | |
|---|--------------------------------|--|--|---|
| | Protection sold | Protection purchased with identical underlyings ^(b) | Net protection (sold)/purchased ^(c) | Other protection purchased ^(d) |
| September 30, 2016 (in millions) | | | | |
| Credit derivatives | | | | |
| Credit default swaps | \$ (1,217,087) | \$ 1,230,857 | \$ 13,770 | \$ 8,587 |
| Other credit derivatives ^(a) | (29,119) | 35,281 | 6,162 | 23,688 |
| Total credit derivatives | (1,246,206) | 1,266,138 | 19,932 | 32,275 |
| Credit-related notes | (28) | — | (28) | 5,123 |
| Total | \$ (1,246,234) | \$ 1,266,138 | \$ 19,904 | \$ 37,398 |
| December 31, 2015 (in millions) | | | | |
| Credit derivatives | | | | |
| Credit default swaps | \$ (1,386,071) | \$ 1,402,201 | \$ 16,130 | \$ 12,011 |
| Other credit derivatives ^(a) | (42,738) | 38,158 | (4,580) | 18,792 |
| Total credit derivatives | (1,428,809) | 1,440,359 | 11,550 | 30,803 |
| Credit-related notes | (30) | — | (30) | 4,715 |
| Total | \$ (1,428,839) | \$ 1,440,359 | \$ 11,520 | \$ 35,518 |

(a) Other credit derivatives predominantly 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 and maturity profile, and the total fair value, of credit derivatives and credit-related notes as of September 30, 2016, and December 31, 2015, 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

| September 30, 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 | \$ (276,853) | \$ (515,954) | \$ (76,261) | \$ (869,068) | \$ 10,084 | \$ (3,936) | \$ 6,148 |
| Noninvestment-grade | (132,323) | (211,830) | (33,013) | (377,166) | 10,356 | (10,891) | (535) |
| Total | \$ (409,176) | \$ (727,784) | \$ (109,274) | \$ (1,246,234) | \$ 20,440 | \$ (14,827) | \$ 5,613 |
| December 31, 2015 (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 | \$ (307,211) | \$ (699,227) | \$ (46,970) | \$ (1,053,408) | \$ 13,539 | \$ (6,836) | \$ 6,703 |
| Noninvestment-grade | (109,195) | (245,151) | (21,085) | (375,431) | 10,823 | (18,891) | (8,068) |
| Total | \$ (416,406) | \$ (944,378) | \$ (68,055) | \$ (1,428,839) | \$ 24,362 | \$ (25,727) | \$ (1,365) |

(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 6 – 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 2015 Annual Report.

The following table presents the components of investment banking fees.

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|--------------------------------------|-------------------------------------|-----------------|------------------------------------|-----------------|
| | 2016 | 2015 | 2016 | 2015 |
| Underwriting | | | | |
| Equity | \$ 369 | \$ 257 | \$ 854 | \$ 1,108 |
| Debt | 958 | 855 | 2,404 | 2,621 |
| Total underwriting | 1,327 | 1,112 | 3,258 | 3,729 |
| Advisory | 539 | 492 | 1,585 | 1,502 |
| Total investment banking fees | \$ 1,866 | \$ 1,604 | \$ 4,843 | \$ 5,231 |

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 7 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 September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|-----------------|------------------------------------|-----------------|
| | 2016 | 2015 | 2016 | 2015 |
| Trading revenue by instrument type | | | | |
| Interest rate | \$ 825 | \$ 530 | \$ 1,843 | \$ 1,836 |
| Credit | 549 | 438 | 1,652 | 1,477 |
| Foreign exchange | 818 | 607 | 2,101 | 2,014 |
| Equity | 893 | 637 | 2,584 | 2,593 |
| Commodity ^(a) | 245 | 156 | 695 | 745 |
| Total trading revenue | 3,330 | 2,368 | 8,875 | 8,665 |
| Private equity gains ^(b) | 121 | (1) | 231 | 191 |
| Principal transactions | \$ 3,451 | \$ 2,367 | \$ 9,106 | \$ 8,856 |

(a) Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. For gains/(losses) related to commodity fair value hedges, see Note 5.

(b) Includes revenue on private equity investments held in the Private Equity business within Corporate, as well as those held in other business segments.

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

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|-----------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Asset management fees | | | | |
| Investment management fees ^(a) | \$ 2,203 | \$ 2,327 | \$ 6,541 | \$ 7,017 |
| All other asset management fees ^(b) | 90 | 92 | 277 | 290 |
| Total asset management fees | 2,293 | 2,419 | 6,818 | 7,307 |
| Total administration fees ^(c) | 478 | 486 | 1,444 | 1,520 |
| Commission and other fees | | | | |
| Brokerage commissions | 505 | 575 | 1,628 | 1,761 |
| All other commissions and fees | 321 | 365 | 1,012 | 1,079 |
| Total commissions and fees | 826 | 940 | 2,640 | 2,840 |
| Total asset management, administration and commissions | \$ 3,597 | \$ 3,845 | \$ 10,902 | \$ 11,667 |

(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 September 30, | | Nine months ended September 30, | |
|-------------------------------|-------------------------------------|---------------|------------------------------------|-----------------|
| | 2016 | 2015 | 2016 | 2015 |
| Operating lease income | \$ 708 | \$ 536 | \$ 1,974 | \$ 1,509 |

Note 7 – 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 2015 Annual Report.

Details of interest income and interest expense were as follows.

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|------------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Interest income | | | | |
| Loans | \$ 9,237 | \$ 8,433 | \$ 27,065 | \$ 24,459 |
| Taxable securities | 1,365 | 1,553 | 4,187 | 4,885 |
| Nontaxable securities ^(a) | 436 | 439 | 1,321 | 1,260 |
| Total securities | 1,801 | 1,992 | 5,508 | 6,145 |
| Trading assets | 1,890 | 1,538 | 5,448 | 5,008 |
| Federal funds sold and securities purchased under resale agreements | 566 | 431 | 1,696 | 1,167 |
| Securities borrowed ^(b) | (91) | (118) | (279) | (397) |
| Deposits with banks | 448 | 291 | 1,374 | 944 |
| Other assets ^(c) | 219 | 172 | 623 | 492 |
| Total interest income | 14,070 | 12,739 | 41,435 | 37,818 |
| Interest expense | | | | |
| Interest-bearing deposits | 340 | 293 | 981 | 965 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 286 | 159 | 828 | 444 |
| Commercial paper | 34 | 24 | 105 | 88 |
| Trading liabilities – debt, short-term and other liabilities ^(d) | 285 | 132 | 826 | 459 |
| Long-term debt | 1,387 | 1,092 | 3,999 | 3,254 |
| Beneficial interests issued by consolidated VIEs | 135 | 115 | 366 | 323 |
| Total interest expense | 2,467 | 1,815 | 7,105 | 5,533 |
| Net interest income | 11,603 | 10,924 | 34,330 | 32,285 |
| Provision for credit losses | 1,271 | 682 | 4,497 | 2,576 |
| Net interest income after provision for credit losses | \$ 10,332 | \$ 10,242 | \$ 29,833 | \$ 29,709 |

(a) Represents securities which are tax-exempt for U.S. federal income tax purposes.

(b) Negative interest income for the three and nine months ended September 30, 2016 and 2015, 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 short-term and other liabilities.

(c) Largely margin loans.

(d) Includes brokerage customer payables.

Note 8 – 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 2015 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 September 30, (in millions) | Pension plans | | | | OPEB plans | |
|---|---------------|---------------|--------------|--------------|----------------|----------------|
| | U.S. | | Non-U.S. | | | |
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Components of net periodic benefit cost | | | | | | |
| Benefits earned during the period | \$ 74 | \$ 85 | \$ 9 | \$ 9 | \$ – | \$ – |
| Interest cost on benefit obligations | 133 | 125 | 21 | 28 | 7 | 8 |
| Expected return on plan assets | (223) | (232) | (32) | (38) | (26) | (27) |
| Amortization: | | | | | | |
| Net (gain)/loss | 59 | 62 | 6 | 9 | – | – |
| Prior service cost/(credit) | (9) | (9) | – | – | – | – |
| Net periodic defined benefit cost | 34 | 31 | 4 | 8 | (19) | (19) |
| Other defined benefit pension plans ^(a) | 3 | 3 | 3 | 2 | NA | NA |
| Total defined benefit plans | 37 | 34 | 7 | 10 | (19) | (19) |
| Total defined contribution plans | 123 | 119 | 80 | 85 | NA | NA |
| Total pension and OPEB cost included in compensation expense | \$ 160 | \$ 153 | \$ 87 | \$ 95 | \$ (19) | \$ (19) |

| Nine months ended September 30, (in millions) | Pension plans | | | | OPEB plans | |
|---|---------------|---------------|---------------|---------------|----------------|----------------|
| | U.S. | | Non-U.S. | | | |
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Components of net periodic benefit cost | | | | | | |
| Benefits earned during the period | \$ 221 | \$ 255 | \$ 27 | \$ 28 | \$ – | \$ – |
| Interest cost on benefit obligations | 399 | 375 | 71 | 84 | 22 | 24 |
| Expected return on plan assets | (668) | (697) | (102) | (113) | (78) | (80) |
| Amortization: | | | | | | |
| Net (gain)/loss | 176 | 185 | 17 | 27 | – | – |
| Prior service cost/(credit) | (26) | (26) | (1) | (1) | – | – |
| Net periodic defined benefit cost | 102 | 92 | 12 | 25 | (56) | (56) |
| Other defined benefit pension plans ^(a) | 10 | 10 | 8 | 7 | NA | NA |
| Total defined benefit plans | 112 | 102 | 20 | 32 | (56) | (56) |
| Total defined contribution plans | 345 | 323 | 249 | 254 | NA | NA |
| Total pension and OPEB cost included in compensation expense | \$ 457 | \$ 425 | \$ 269 | \$ 286 | \$ (56) | \$ (56) |

(a) Includes various defined benefit pension plans which are individually immaterial.

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 were \$16.2 billion and \$3.7 billion, as of September 30, 2016, and \$16.0 billion and \$3.5 billion respectively, as of December 31, 2015. See Note 19 for further information on unrecognized amounts (i.e., net (gain)/loss and prior service costs/(credit)) reflected in AOCI for the three and nine months ended September 30, 2016 and 2015.

The Firm does not anticipate any contribution to the U.S. defined benefit pension plan in 2016 at this time. For 2016, the cost associated with funding benefits under the Firm's U.S. non-qualified defined benefit pension plans is expected to total \$33 million. The 2016 contributions to the non-U.S. defined benefit pension and OPEB plans are expected to be \$47 million and \$2 million, respectively.

Note 9 – 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 2015 Annual Report.

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated statements of income.

| | Three months ended September 30, | | Nine months ended September 30, | |
|--|-------------------------------------|---------------|------------------------------------|-----------------|
| (in millions) | 2016 | 2015 | 2016 | 2015 |
| Cost of prior grants of RSUs, stock appreciation rights (“SARs”) and performance share units (“PSUs”) that are amortized over their applicable vesting periods | \$ 257 | \$ 269 | \$ 808 | \$ 856 |
| Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees | 230 | 195 | 752 | 683 |
| Total noncash compensation expense related to employee stock-based incentive plans | \$ 487 | \$ 464 | \$ 1,560 | \$ 1,539 |

In the first quarter of 2016, in connection with its annual incentive grant for the 2015 performance year, the Firm granted 33 million RSUs and 926 thousand PSUs, all with a weighted-average grant date fair value of \$57.24.

PSU Awards

In January 2016, the Firm’s Board of Directors approved the grant of PSUs to members of the Firm’s Operating Committee under the variable compensation program for performance year 2015. PSUs are subject to the Firm’s achievement of specified performance criteria over a three-year period. The number of awards that vest can range from zero to 150% of the grant amount. The awards vest and are converted into shares of common stock in the quarter after the end of the three-year performance period. In addition, dividends will be notionally reinvested in the Firm’s common stock and will be delivered only in respect of any earned shares.

Once the PSUs have vested, the shares of common stock that are delivered, after applicable tax withholding, must be held for an additional two-year period, for a total combined vesting and holding period of five years from the grant date.

Note 10 – Noninterest expense

For details on noninterest expense, see Consolidated statements of income on page 85. Included within other expense are the following:

| | Three months ended September 30, | | Nine months ended September 30, | |
|-------------------------|-------------------------------------|----------|------------------------------------|----------|
| (in millions) | 2016 | 2015 | 2016 | 2015 |
| Legal expense/(benefit) | \$ (71) | \$ 1,347 | \$ (547) | \$ 2,325 |
| FDIC-related expense | 360 | 298 | 912 | 916 |

Note 11 – Securities

Securities are classified as trading, AFS or HTM. Securities classified as trading assets are discussed in Note 3. 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 September 30, 2016, 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 2015 Annual Report.

During the second quarter of 2016, the Firm transferred commercial MBS and obligations of U.S. states and municipalities with a fair value of \$7.5 billion from AFS to HTM. These securities were transferred at fair value. AOCI included net pretax unrealized gains of \$78 million on the securities at the date of transfer. The transfers reflect the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI. This transfer was a non-cash transaction.

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

| (in millions) | September 30, 2016 | | | | December 31, 2015 | | | |
|--|--------------------|------------------------|-------------------------|-------------------|-------------------|------------------------|-------------------------|-------------------|
| | 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) | 54,961 | 1,876 | 15 | \$ 56,822 | \$ 53,689 | \$ 1,483 | \$ 106 | \$ 55,066 |
| Residential: | | | | | | | | |
| Prime and Alt-A | 6,269 | 86 | 24 | 6,331 | 7,462 | 40 | 57 | 7,445 |
| Subprime | 2,582 | 22 | — | 2,604 | 210 | 7 | — | 217 |
| Non-U.S. | 6,801 | 180 | 10 | 6,971 | 19,629 | 341 | 13 | 19,957 |
| Commercial | 11,378 | 181 | 35 | 11,524 | 22,990 | 150 | 243 | 22,897 |
| Total mortgage-backed securities | 81,991 | 2,345 | 84 | 84,252 | 103,980 | 2,021 | 419 | 105,582 |
| U.S. Treasury and government agencies ^(a) | 21,674 | 52 | 218 | 21,508 | 11,202 | — | 166 | 11,036 |
| Obligations of U.S. states and municipalities | 28,685 | 2,728 | 10 | 31,403 | 31,328 | 2,245 | 23 | 33,550 |
| Certificates of deposit | 108 | — | — | 108 | 282 | 1 | — | 283 |
| Non-U.S. government debt securities | 36,120 | 1,150 | 17 | 37,253 | 35,864 | 853 | 41 | 36,676 |
| Corporate debt securities | 5,336 | 76 | 29 | 5,383 | 12,464 | 142 | 170 | 12,436 |
| Asset-backed securities: | | | | | | | | |
| Collateralized loan obligations | 30,688 | 76 | 43 | 30,721 | 31,146 | 52 | 191 | 31,007 |
| Other | 7,681 | 62 | 67 | 7,676 | 9,125 | 72 | 100 | 9,097 |
| Total available-for-sale debt securities | 212,283 | 6,489 | 468 | 218,304 | 235,391 | 5,386 | 1,110 | 239,667 |
| Available-for-sale equity securities | 2,065 | 21 | — | 2,086 | 2,067 | 20 | — | 2,087 |
| Total available-for-sale securities | \$ 214,348 | \$ 6,510 | \$ 468 | \$ 220,390 | \$ 237,458 | \$ 5,406 | \$ 1,110 | \$ 241,754 |
| Held-to-maturity debt securities | | | | | | | | |
| Mortgage-backed securities: | | | | | | | | |
| U.S. government agencies ^(b) | 31,730 | 1,599 | — | 33,329 | 36,271 | 852 | 42 | 37,081 |
| Commercial | 5,792 | 124 | — | 5,916 | — | — | — | — |
| Total mortgage-backed securities | 37,522 | 1,723 | — | 39,245 | 36,271 | 852 | 42 | 37,081 |
| Obligations of U.S. states and municipalities | 14,489 | 1,005 | 6 | 15,488 | 12,802 | 708 | 4 | 13,506 |
| Total held-to-maturity debt securities | 52,011 | 2,728 | 6 | 54,733 | 49,073 | 1,560 | 46 | 50,587 |
| Total securities | \$ 266,359 | \$ 9,238 | \$ 474 | \$ 275,123 | \$ 286,531 | \$ 6,966 | \$ 1,156 | \$ 292,341 |

(a) Included total U.S. government-sponsored enterprise obligations with fair values of \$37.5 billion and \$42.3 billion at September 30, 2016, and December 31, 2015, respectively, which were predominantly mortgage-related.

(b) Included total U.S. government-sponsored enterprise obligations with amortized cost of \$27.1 billion and \$30.8 billion at September 30, 2016, and December 31, 2015, respectively, which were predominantly mortgage-related.

Securities impairment

The following tables present the fair value and gross unrealized losses for investment securities by aging category at September 30, 2016, and December 31, 2015.

| September 30, 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 | \$ 2,428 | \$ 6 | \$ 458 | \$ 9 | \$ 2,886 | \$ 15 |
| Residential: | | | | | | |
| Prime and Alt-A | 660 | 6 | 1,036 | 18 | 1,696 | 24 |
| Subprime | — | — | — | — | — | — |
| Non-U.S. | 354 | 1 | 886 | 9 | 1,240 | 10 |
| Commercial | 3,205 | 29 | 1,308 | 6 | 4,513 | 35 |
| Total mortgage-backed securities | 6,647 | 42 | 3,688 | 42 | 10,335 | 84 |
| U.S. Treasury and government agencies | 17,595 | 218 | — | — | 17,595 | 218 |
| Obligations of U.S. states and municipalities | 685 | 9 | 49 | 1 | 734 | 10 |
| Certificates of deposit | — | — | — | — | — | — |
| Non-U.S. government debt securities | 2,559 | 6 | 430 | 11 | 2,989 | 17 |
| Corporate debt securities | — | — | 977 | 29 | 977 | 29 |
| Asset-backed securities: | | | | | | |
| Collateralized loan obligations | 1,226 | 1 | 7,936 | 42 | 9,162 | 43 |
| Other | 1,964 | 40 | 1,094 | 27 | 3,058 | 67 |
| Total available-for-sale debt securities | 30,676 | 316 | 14,174 | 152 | 44,850 | 468 |
| Available-for-sale equity securities | — | — | — | — | — | — |
| Held-to-maturity securities | | | | | | |
| Mortgage-backed securities | | | | | | |
| U.S. government agencies | — | — | — | — | — | — |
| Commercial | — | — | — | — | — | — |
| Total mortgage-backed securities | — | — | — | — | — | — |
| Obligations of U.S. states and municipalities | 824 | 6 | — | — | 824 | 6 |
| Total held-to-maturity securities | 824 | 6 | — | — | 824 | 6 |
| Total securities with gross unrealized losses | \$ 31,500 | \$ 322 | \$ 14,174 | \$ 152 | \$ 45,674 | \$ 474 |

| December 31, 2015 (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 | \$ 13,002 | \$ 95 | \$ 697 | \$ 11 | \$ 13,699 | \$ 106 |
| Residential: | | | | | | |
| Prime and Alt-A | 5,147 | 51 | 238 | 6 | 5,385 | 57 |
| Subprime | — | — | — | — | — | — |
| Non-U.S. | 2,021 | 12 | 167 | 1 | 2,188 | 13 |
| Commercial | 13,779 | 239 | 658 | 4 | 14,437 | 243 |
| Total mortgage-backed securities | 33,949 | 397 | 1,760 | 22 | 35,709 | 419 |
| U.S. Treasury and government agencies | 10,998 | 166 | — | — | 10,998 | 166 |
| Obligations of U.S. states and municipalities | 1,676 | 18 | 205 | 5 | 1,881 | 23 |
| Certificates of deposit | — | — | — | — | — | — |
| Non-U.S. government debt securities | 3,267 | 26 | 367 | 15 | 3,634 | 41 |
| Corporate debt securities | 3,198 | 125 | 848 | 45 | 4,046 | 170 |
| Asset-backed securities: | | | | | | |
| Collateralized loan obligations | 15,340 | 67 | 10,692 | 124 | 26,032 | 191 |
| Other | 4,284 | 60 | 1,005 | 40 | 5,289 | 100 |
| Total available-for-sale debt securities | 72,712 | 859 | 14,877 | 251 | 87,589 | 1,110 |
| Available-for-sale equity securities | — | — | — | — | — | — |
| Held-to-maturity debt securities | | | | | | |
| Mortgage-backed securities | | | | | | |
| U.S. government agencies | 3,294 | 42 | — | — | 3,294 | 42 |
| Commercial | — | — | — | — | — | — |
| Total mortgage-backed securities | 3,294 | 42 | — | — | 3,294 | 42 |
| Obligations of U.S. states and municipalities | 469 | 4 | — | — | 469 | 4 |
| Total Held-to-maturity securities | 3,763 | 46 | — | — | 3,763 | 46 |
| Total securities with gross unrealized losses | \$ 76,475 | \$ 905 | \$ 14,877 | \$ 251 | \$ 91,352 | \$ 1,156 |

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 September 30, 2016, 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 as of September 30, 2016, are not other-than-temporarily impaired. For additional information on other-than-temporary impairment, see Note 12 of the JPMorgan Chase's 2015 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 September 30, | | Nine months ended September 30, | |
|--|----------------------------------|----------------|---------------------------------|----------------|
| | 2016 | 2015 | 2016 | 2015 |
| Realized gains | \$ 95 | \$ 65 | \$ 284 | \$ 250 |
| Realized losses | (22) | (20) | (110) | (107) |
| OTTI losses | (9) | (12) | (38) | (14) |
| Net securities gains | \$ 64 | \$ 33 | \$ 136 | \$ 129 |
| OTTI losses | | | | |
| Credit-related losses recognized in income | \$ — | \$ — | \$ (1) | \$ (1) |
| Securities the Firm intends to sell ^(a) | (9) | (12) | (37) | (13) |
| Total OTTI losses recognized in income | \$ (9) | \$ (12) | \$ (38) | \$ (14) |

(a) Excludes realized losses on securities sold of \$14 million for the nine months ended September 30, 2016 that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The cumulative credit loss component, including any changes therein, of OTTI losses that have been recognized in income related to AFS debt securities that the Firm does not intend to sell was not material as of and during the three and nine month periods ended September 30, 2016 and 2015.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at September 30, 2016, of JPMorgan Chase's investment securities portfolio by contractual maturity.

| By remaining maturity September 30, 2016 (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 | \$ | 1,577 | \$ | 3,188 | \$ | 8,327 | \$ | 68,899 | \$ 81,991 |
| Fair value | | 1,586 | | 3,269 | | 8,576 | | 70,821 | 84,252 |
| Average yield ^(b) | | 2.18% | | 2.27% | | 2.93% | | 3.26% | 3.17% |
| U.S. Treasury and government agencies | | | | | | | | | |
| Amortized cost | \$ | 75 | \$ | 4,731 | \$ | 15,531 | \$ | 1,337 | \$ 21,674 |
| Fair value | | 75 | | 4,714 | | 15,462 | | 1,257 | 21,508 |
| Average yield ^(b) | | 0.43% | | 0.70% | | 1.22% | | 0.91% | 1.08% |
| Obligations of U.S. states and municipalities | | | | | | | | | |
| Amortized cost | \$ | 123 | \$ | 666 | \$ | 1,045 | \$ | 26,851 | \$ 28,685 |
| Fair value | | 125 | | 688 | | 1,124 | | 29,466 | 31,403 |
| Average yield ^(b) | | 6.15% | | 3.27% | | 6.25% | | 6.66% | 6.56% |
| Certificates of deposit | | | | | | | | | |
| Amortized cost | \$ | 108 | \$ | — | \$ | — | \$ | — | \$ 108 |
| Fair value | | 108 | | — | | — | | — | 108 |
| Average yield ^(b) | | 1.76% | | —% | | —% | | —% | 1.76% |
| Non-U.S. government debt securities | | | | | | | | | |
| Amortized cost | \$ | 5,777 | \$ | 14,341 | \$ | 13,917 | \$ | 2,085 | \$ 36,120 |
| Fair value | | 5,792 | | 14,734 | | 14,548 | | 2,179 | 37,253 |
| Average yield ^(b) | | 2.94% | | 1.47% | | 0.92% | | 0.48% | 1.44% |
| Corporate debt securities | | | | | | | | | |
| Amortized cost | \$ | 1,551 | \$ | 2,025 | \$ | 1,630 | \$ | 130 | \$ 5,336 |
| Fair value | | 1,565 | | 2,058 | | 1,630 | | 130 | 5,383 |
| Average yield ^(b) | | 3.53% | | 2.67% | | 2.99% | | 3.22% | 3.03% |
| Asset-backed securities | | | | | | | | | |
| Amortized cost | \$ | 7 | \$ | 565 | \$ | 22,889 | \$ | 14,908 | \$ 38,369 |
| Fair value | | 7 | | 568 | | 22,895 | | 14,927 | 38,397 |
| Average yield ^(b) | | 2.47% | | 0.79% | | 2.17% | | 2.08% | 2.12% |
| Total available-for-sale debt securities | | | | | | | | | |
| Amortized cost | \$ | 9,218 | \$ | 25,516 | \$ | 63,339 | \$ | 114,210 | \$ 212,283 |
| Fair value | | 9,258 | | 26,031 | | 64,235 | | 118,780 | 218,304 |
| Average yield ^(b) | | 2.92% | | 1.55% | | 1.85% | | 3.83% | 2.93% |
| Available-for-sale equity securities | | | | | | | | | |
| Amortized cost | \$ | — | \$ | — | \$ | — | \$ | 2,065 | \$ 2,065 |
| Fair value | | — | | — | | — | | 2,086 | 2,086 |
| Average yield ^(b) | | —% | | —% | | —% | | 0.29% | 0.29% |
| Total available-for-sale securities | | | | | | | | | |
| Amortized cost | \$ | 9,218 | \$ | 25,516 | \$ | 63,339 | \$ | 116,275 | \$ 214,348 |
| Fair value | | 9,258 | | 26,031 | | 64,235 | | 120,866 | 220,390 |
| Average yield ^(b) | | 2.92% | | 1.55% | | 1.85% | | 3.77% | 2.90% |
| Held-to-maturity debt securities | | | | | | | | | |
| Mortgage-backed securities ^(a) | | | | | | | | | |
| Amortized cost | \$ | — | \$ | — | \$ | — | \$ | 37,522 | \$ 37,522 |
| Fair value | | — | | — | | — | | 39,245 | 39,245 |
| Average yield ^(b) | | —% | | —% | | —% | | 3.31% | 3.31% |
| Obligations of U.S. states and municipalities | | | | | | | | | |
| Amortized cost | \$ | — | \$ | 29 | \$ | 1,385 | \$ | 13,075 | \$ 14,489 |
| Fair value | | — | | 30 | | 1,470 | | 13,988 | 15,488 |
| Average yield ^(b) | | —% | | 6.11% | | 5.08% | | 5.68% | 5.62% |
| Total held-to-maturity securities | | | | | | | | | |
| Amortized cost | \$ | — | \$ | 29 | \$ | 1,385 | \$ | 50,597 | \$ 52,011 |
| Fair value | | — | | 30 | | 1,470 | | 53,233 | 54,733 |
| Average yield ^(b) | | —% | | 6.11% | | 5.08% | | 3.92% | 3.95% |

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at September 30, 2016.

- (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 5 years for agency residential MBS, 2 years for agency residential collateralized mortgage obligations and 3 years for nonagency residential collateralized mortgage obligations.

Note 12 – Securities financing activities

For a discussion of accounting policies relating to securities financing activities, see Note 13 of JPMorgan Chase's 2015 Annual Report. For further information regarding securities borrowed and securities lending agreements for which the fair value option has been elected, see Note 4. For further information regarding assets pledged and collateral received in securities financing agreements, see Note 22.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements as of September 30, 2016 and December 31, 2015. 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 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.

| September 30, 2016 | | | | | |
|--|---------------|---|---|--|----------------------------|
| (in millions) | 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 | \$ 448,134 | \$ (215,572) | \$ 232,562 | \$ (226,850) | \$ 5,712 |
| Securities borrowed | 109,197 | – | 109,197 | (78,667) | 30,530 |
| Liabilities | | | | | |
| Securities sold under repurchase agreements | \$ 367,383 | \$ (215,572) | \$ 151,811 | \$ (132,431) | \$ 19,380 |
| Securities loaned and other ^(a) | 23,002 | – | 23,002 | (22,926) | 76 |
| December 31, 2015 | | | | | |
| (in millions) | 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 | \$ 368,148 | \$ (156,258) | \$ 211,890 | \$ (207,958) ^(e) | \$ 3,932 ^(e) |
| Securities borrowed | 98,721 | – | 98,721 | (65,081) | 33,640 |
| Liabilities | | | | | |
| Securities sold under repurchase agreements | \$ 290,044 | \$ (156,258) | \$ 133,786 | \$ (119,332) ^(e) | \$ 14,454 ^(e) |
| Securities loaned and other ^(a) | 22,556 | – | 22,556 | (22,245) | 311 |

- (a) Includes securities-for-securities lending transactions of \$7.4 billion and \$4.4 billion at September 30, 2016 and December 31, 2015, 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.
- (b) Includes securities financing agreements accounted for at fair value. At September 30, 2016 and December 31, 2015, included securities purchased under resale agreements of \$23.0 billion and \$23.1 billion, respectively, securities borrowed of zero and \$395 million, respectively, and securities sold under agreements to repurchase of \$1.4 billion and \$3.5 billion, respectively. 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 September 30, 2016 and December 31, 2015, included \$3.9 billion and \$2.3 billion, respectively, of securities purchased under resale agreements; \$27.9 billion and \$31.3 billion, respectively, of securities borrowed; \$17.5 billion and \$12.6 billion, respectively, of securities sold under agreements to repurchase; and \$22 million and \$45 million, respectively, of securities loaned and other.
- (e) The prior period amounts have been revised to conform with the current presentation.

The tables below present as of September 30, 2016, and December 31, 2015 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 | | | |
|---|---|--|---|--|
| | September 30, 2016 | | December 31, 2015 | |
| | Securities sold under repurchase agreements | Securities loaned and other ^(a) | Securities sold under repurchase agreements | Securities loaned and other ^(a) |
| Mortgage-backed securities | \$ 17,038 | \$ — | \$ 12,790 | \$ — |
| U.S. Treasury and government agencies | 202,515 | 17 | 154,377 | 5 |
| Obligations of U.S. states and municipalities | 2,076 | — | 1,316 | — |
| Non-U.S. government debt | 106,088 | 5,813 | 80,162 | 4,426 |
| Corporate debt securities | 19,754 | 86 | 21,286 | 78 |
| Asset-backed securities | 5,139 | — | 4,394 | — |
| Equity securities | 14,773 | 17,086 | 15,719 | 18,047 |
| Total | \$ 367,383 | \$ 23,002 | \$ 290,044 | \$ 22,556 |

| September 30, 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 | \$ 141,524 | \$ 132,267 | \$ 41,871 | \$ 51,721 | \$ 367,383 |
| Total securities loaned and other ^(a) | 11,460 | 647 | 1,588 | 9,307 | 23,002 |

| December 31, 2015 (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 | \$ 114,595 | \$ 100,082 | \$ 29,955 | \$ 45,412 | \$ 290,044 |
| Total securities loaned and other ^(a) | 8,320 | 708 | 793 | 12,735 | 22,556 |

(a) Includes securities-for-securities lending transactions of \$7.4 billion and \$4.4 billion at September 30, 2016 and December 31, 2015, 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 September 30, 2016, and December 31, 2015, the Firm held \$5.8 billion and \$7.5 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 13 – 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 2015 Annual Report. See Note 4 of this Form 10-Q for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 of this Form 10-Q for further 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) • Business banking^{(d)(e)} • Student and other <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 AM and prime mortgage loans held in Corporate.

(b) Includes senior and junior lien home equity loans.

(c) 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 as well as deposit overdrafts.

(f) Includes loans held in CIB, CB, AM and Corporate. Excludes prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.

(g) Includes loans to: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16 of JPMorgan Chase's 2015 Annual Report.

The following tables summarize the Firm's loan balances by portfolio segment.

| September 30, 2016 (in millions) | Consumer, excluding credit card | Credit card ^(a) | Wholesale | Total |
|-------------------------------------|---------------------------------|----------------------------|-------------------|---------------------------|
| Retained | \$ 363,398 | \$ 133,346 | \$ 386,449 | \$ 883,193 ^(b) |
| Held-for-sale | 398 | 89 | 2,463 | 2,950 |
| At fair value | — | — | 1,911 | 1,911 |
| Total | \$ 363,796 | \$ 133,435 | \$ 390,823 | \$ 888,054 |

| December 31, 2015 (in millions) | Consumer, excluding credit card | Credit card ^(a) | Wholesale | Total |
|------------------------------------|---------------------------------|----------------------------|-------------------|---------------------------|
| Retained | \$ 344,355 | \$ 131,387 | \$ 357,050 | \$ 832,792 ^(b) |
| Held-for-sale | 466 | 76 | 1,104 | 1,646 |
| At fair value | — | — | 2,861 | 2,861 |
| Total | \$ 344,821 | \$ 131,463 | \$ 361,015 | \$ 837,299 |

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

(b) Loans (other than PCI loans and those 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 September 30, 2016, and December 31, 2015.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude 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 September 30, (in millions) | 2016 | | | | 2015 | | | |
|---|---------------------------------------|-------------|-----------|----------|---------------------------------------|-------------|-----------|----------|
| | Consumer, excluding credit card | Credit card | Wholesale | Total | Consumer, excluding credit card | Credit card | Wholesale | Total |
| Purchases | \$ 959 ^{(a)(b)} | \$ — | \$ 282 | \$ 1,241 | \$ 1,196 ^{(a)(b)} | \$ — | \$ 1,199 | \$ 2,395 |
| Sales | 577 | — | 2,637 | 3,214 | 1,130 | — | 1,856 | 2,986 |
| Retained loans reclassified to held-for-sale | 176 | — | 777 | 953 | — | 79 | 20 | 99 |

| Nine months ended September 30, (in millions) | 2016 | | | | 2015 | | | |
|--|---------------------------------------|-------------|-----------|----------|---------------------------------------|------------------|-----------|----------|
| | Consumer, excluding credit card | Credit card | Wholesale | Total | Consumer, excluding credit card | Credit card | Wholesale | Total |
| Purchases | \$ 3,048 ^{(a)(b)} | \$ — | \$ 975 | \$ 4,023 | \$ 3,918 ^{(a)(b)} | \$ — | \$ 1,894 | \$ 5,812 |
| Sales | 2,242 | — | 6,383 | 8,625 | 4,073 | — ^(c) | 7,381 | 11,454 |
| Retained loans reclassified to held-for-sale | 259 | — | 1,393 | 1,652 | 1,272 | 79 | 455 | 1,806 |

- (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 \$6.7 billion and \$14.4 billion for the three months ended September 30, 2016 and 2015, respectively, and \$23.8 billion and \$39.8 billion for the nine months ended September 30, 2016 and 2015, respectively.
- (c) Prior period amounts have been revised to conform with current period presentation.

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

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|---------------|------------------------------------|---------------|
| | 2016 | 2015 | 2016 | 2015 |
| Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)^(a) | | | | |
| Consumer, excluding credit card | \$ 51 | \$ 62 | \$ 168 | \$ 239 |
| Credit card | (2) | 13 | (6) | 22 |
| Wholesale | 17 | 33 | 15 | 32 |
| Total net gains on sales of loans (including lower of cost or fair value adjustments) | \$ 66 | \$ 108 | \$ 177 | \$ 293 |

- (a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior 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 millions) | September 30, 2016 | December 31, 2015 |
|--|-----------------------|----------------------|
| Residential real estate – excluding PCI | | |
| Home equity | \$ 40,740 | \$ 45,559 |
| Residential mortgage | 189,558 | 166,239 |
| Other consumer loans | | |
| Auto | 64,512 | 60,255 |
| Business banking | 22,292 | 21,208 |
| Student and other | 9,251 | 10,096 |
| Residential real estate – PCI | | |
| Home equity | 13,448 | 14,989 |
| Prime mortgage | 7,919 | 8,893 |
| Subprime mortgage | 3,021 | 3,263 |
| Option ARMs | 12,657 | 13,853 |
| Total retained loans | \$ 363,398 | \$ 344,355 |

For further information on consumer credit quality indicators, see Note 14 of JPMorgan Chase's 2015 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 ^(a) | | Residential mortgage ^(a) | | Total residential real estate – excluding PCI | |
|---|----------------------------|------------------|-------------------------------------|-------------------|---|-------------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Loan delinquency^(a) | | | | | | |
| Current | \$ 39,644 | \$ 44,299 | \$ 181,247 | \$ 156,463 | \$ 220,891 | \$ 200,762 |
| 30–149 days past due | 610 | 708 | 3,737 | 4,042 | 4,347 | 4,750 |
| 150 or more days past due | 486 | 552 | 4,574 | 5,734 | 5,060 | 6,286 |
| Total retained loans | \$ 40,740 | \$ 45,559 | \$ 189,558 | \$ 166,239 | \$ 230,298 | \$ 211,798 |
| % of 30+ days past due to total retained loans ^(b) | 2.69% | 2.77% | 0.81% | 1.03% | 1.14% | 1.40% |
| 90 or more days past due and government guaranteed ^(c) | \$ – | \$ – | \$ 4,796 | \$ 6,056 | \$ 4,796 | \$ 6,056 |
| Nonaccrual loans | 1,904 | 2,191 | 2,295 | 2,503 | 4,199 | 4,694 |
| Current estimated LTV ratios^{(d)(e)} | | | | | | |
| Greater than 125% and refreshed FICO scores: | | | | | | |
| Equal to or greater than 660 | \$ 65 | \$ 165 | \$ 52 | \$ 58 | \$ 117 | \$ 223 |
| Less than 660 | 18 | 32 | 64 | 77 | 82 | 109 |
| 101% to 125% and refreshed FICO scores: | | | | | | |
| Equal to or greater than 660 | 810 | 1,344 | 162 | 274 | 972 | 1,618 |
| Less than 660 | 266 | 434 | 237 | 291 | 503 | 725 |
| 80% to 100% and refreshed FICO scores: | | | | | | |
| Equal to or greater than 660 | 3,346 | 4,537 | 4,009 | 3,159 | 7,355 | 7,696 |
| Less than 660 | 1,069 | 1,409 | 880 | 996 | 1,949 | 2,405 |
| Less than 80% and refreshed FICO scores: | | | | | | |
| Equal to or greater than 660 | 28,185 | 29,648 | 165,480 | 142,241 | 193,665 | 171,889 |
| Less than 660 | 4,534 | 4,934 | 7,027 | 6,797 | 11,561 | 11,731 |
| No FICO/LTV available | 2,447 | 3,056 | 2,095 | 1,658 | 4,542 | 4,714 |
| U.S. government-guaranteed | – | – | 9,552 | 10,688 | 9,552 | 10,688 |
| Total retained loans | \$ 40,740 | \$ 45,559 | \$ 189,558 | \$ 166,239 | \$ 230,298 | \$ 211,798 |
| Geographic region | | | | | | |
| California | \$ 7,992 | \$ 8,945 | \$ 57,410 | \$ 47,263 | \$ 65,402 | \$ 56,208 |
| New York | 8,345 | 9,147 | 24,282 | 21,462 | 32,627 | 30,609 |
| Illinois | 3,067 | 3,420 | 13,117 | 11,524 | 16,184 | 14,944 |
| Texas | 2,278 | 2,532 | 10,519 | 9,128 | 12,797 | 11,660 |
| Florida | 2,196 | 2,409 | 8,295 | 7,177 | 10,491 | 9,586 |
| New Jersey | 2,324 | 2,590 | 6,365 | 5,567 | 8,689 | 8,157 |
| Washington | 1,287 | 1,451 | 5,159 | 4,176 | 6,446 | 5,627 |
| Arizona | 1,858 | 2,143 | 3,604 | 3,155 | 5,462 | 5,298 |
| Michigan | 1,194 | 1,350 | 2,069 | 1,945 | 3,263 | 3,295 |
| Ohio | 1,464 | 1,652 | 1,362 | 1,247 | 2,826 | 2,899 |
| All other ^(f) | 8,735 | 9,920 | 57,376 | 53,595 | 66,111 | 63,515 |
| Total retained loans | \$ 40,740 | \$ 45,559 | \$ 189,558 | \$ 166,239 | \$ 230,298 | \$ 211,798 |

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included \$2.8 billion and \$2.6 billion; 30–149 days past due included \$2.9 billion and \$3.2 billion; and 150 or more days past due included \$3.9 billion and \$4.9 billion at September 30, 2016, and December 31, 2015, respectively.

(b) At September 30, 2016, and December 31, 2015, Residential mortgage loans excluded mortgage loans insured by U.S. government agencies of \$6.8 billion and \$8.1 billion, respectively. These amounts have been excluded from nonaccrual loans 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 September 30, 2016, and December 31, 2015, these balances included \$2.7 billion and \$3.4 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 September 30, 2016, and December 31, 2015.

(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 September 30, 2016, and December 31, 2015, included mortgage loans insured by U.S. government agencies of \$9.6 billion and \$10.7 billion, respectively.

(g) Includes residential real estate loans to private banking clients in AM, for which the primary credit quality indicators are the borrower's financial position and LTV.

The following table represents the Firm's delinquency statistics for junior lien home equity loans and lines as of September 30, 2016, and December 31, 2015.

| (in millions, except ratios) | Total loans | | Total 30+ day delinquency rate | |
|--|------------------|------------------|--------------------------------|--------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| HELOCs: ^(a) | | | | |
| Within the revolving period ^(b) | \$ 11,646 | \$ 17,050 | 1.18% | 1.57% |
| Beyond the revolving period | 13,135 | 11,252 | 2.90 | 3.10 |
| HELOANS | 1,999 | 2,409 | 2.70 | 3.03 |
| Total | \$ 26,780 | \$ 30,711 | 2.14% | 2.25% |

- (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.

HELOCs beyond the revolving period and HELOANS have higher delinquency rates than HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANS are factored into the Firm's allowance for loan losses.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 of JPMorgan Chase's 2015 Annual Report.

| (in millions) | Home equity | | Residential mortgage | | Total residential real estate - excluding PCI | |
|---|-----------------|-----------------|----------------------|-----------------|---|-----------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Impaired loans | | | | | | |
| With an allowance | \$ 1,287 | \$ 1,293 | \$ 4,865 | \$ 5,243 | \$ 6,152 | \$ 6,536 |
| Without an allowance ^(a) | 966 | 1,065 | 1,349 | 1,447 | 2,315 | 2,512 |
| Total impaired loans^{(b)(c)} | \$ 2,253 | \$ 2,358 | \$ 6,214 | \$ 6,690 | \$ 8,467 | \$ 9,048 |
| Allowance for loan losses related to impaired loans | \$ 132 | \$ 138 | \$ 79 | \$ 108 | \$ 211 | \$ 246 |
| Unpaid principal balance of impaired loans ^(d) | 3,792 | 3,960 | 8,518 | 9,082 | 12,310 | 13,042 |
| Impaired loans on nonaccrual status ^(e) | 1,088 | 1,220 | 1,799 | 1,957 | 2,887 | 3,177 |

- (a) Represents collateral-dependent residential mortgage 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 September 30, 2016, Chapter 7 residential real estate loans included approximately 13% of home equity and 17% of residential mortgages that were 30 days or more past due.
- (b) At September 30, 2016, and December 31, 2015, \$3.6 billion and \$3.8 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 September 30, 2016, and December 31, 2015. 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) As of September 30, 2016, and December 31, 2015, nonaccrual loans included \$2.3 billion and \$2.5 billion, respectively, 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 2015 Annual Report.

The following tables present average impaired loans and the related interest income reported by the Firm.

| Three months ended September 30, (in millions) | Average impaired loans | | Interest income on impaired loans ^(a) | | Interest income on impaired loans on a cash basis ^(a) | |
|--|------------------------|-----------------|---|---------------|---|--------------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Home equity | \$ 2,276 | \$ 2,351 | \$ 31 | \$ 32 | \$ 20 | \$ 20 |
| Residential mortgage | 6,305 | 6,980 | 76 | 82 | 19 | 22 |
| Total residential real estate - excluding PCI | \$ 8,581 | \$ 9,331 | \$ 107 | \$ 114 | \$ 39 | \$ 42 |

| Nine months ended September 30, (in millions) | Average impaired loans | | Interest income on impaired loans ^(a) | | Interest income on impaired loans on a cash basis ^(a) | |
|--|------------------------|------------------|---|---------------|---|---------------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Home equity | \$ 2,325 | \$ 2,371 | \$ 94 | \$ 98 | \$ 61 | \$ 64 |
| Residential mortgage | 6,457 | 7,996 | 231 | 268 | 58 | 68 |
| Total residential real estate - excluding PCI | \$ 8,782 | \$ 10,367 | \$ 325 | \$ 366 | \$ 119 | \$ 132 |

(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.

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 September 30, | | Nine months ended September 30, | |
|--|--|---------------|---------------------------------------|---------------|
| | 2016 | 2015 | 2016 | 2015 |
| Home equity | \$ 62 | \$ 139 | \$ 258 | \$ 286 |
| Residential mortgage | 72 | 62 | 194 | 217 |
| Total residential real estate - excluding PCI | \$ 134 | \$ 201 | \$ 452 | \$ 503 |

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following tables provide information about how residential real estate loans, excluding PCI loans, were modified under the above loss mitigation programs during the periods presented. These tables exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

| Three months ended September 30, | Home equity | | Residential mortgage | | Total residential real estate – excluding PCI | |
|---|-------------|-------|----------------------|------|---|-------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Number of loans approved for a trial modification | 351 | 1,835 | 386 | 664 | 737 | 2,499 |
| Number of loans permanently modified | 1,163 | 953 | 849 | 805 | 2,012 | 1,758 |
| Concession granted:^(a) | | | | | | |
| Interest rate reduction | 83% | 71% | 81% | 73% | 82% | 72% |
| Term or payment extension | 76 | 88 | 86 | 80 | 81 | 84 |
| Principal and/or interest deferred | 21 | 24 | 15 | 22 | 18 | 24 |
| Principal forgiveness | 6 | 4 | 25 | 29 | 14 | 15 |
| Other ^(b) | 6 | – | 27 | 13 | 15 | 6 |

| Nine months ended September 30, | Home equity | | Residential mortgage | | Total residential real estate – excluding PCI | |
|---|-------------|-------|----------------------|-------|---|-------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Number of loans approved for a trial modification | 2,088 | 2,732 | 1,521 | 1,992 | 3,609 | 4,724 |
| Number of loans permanently modified | 3,804 | 2,679 | 2,560 | 2,397 | 6,364 | 5,076 |
| Concession granted:^(a) | | | | | | |
| Interest rate reduction | 74% | 74% | 75% | 71% | 75% | 73% |
| Term or payment extension | 84 | 86 | 89 | 81 | 86 | 84 |
| Principal and/or interest deferred | 12 | 26 | 18 | 26 | 18 | 26 |
| Principal forgiveness | 9 | 5 | 27 | 29 | 16 | 16 |
| Other ^(b) | 1 | – | 14 | 11 | 11 | 5 |

(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) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following tables provide information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the above loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following tables present only the financial effects of permanent modifications. These tables also exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

| Three months ended September 30, (in millions, except weighted-average data and number of loans) | Home equity | | Residential mortgage | | Total residential real estate - excluding PCI | |
|--|-------------|-------|----------------------|-------|--|-------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Weighted-average interest rate of loans with interest rate reductions - before TDR | 4.99% | 5.20% | 5.76% | 5.76% | 5.47% | 5.57% |
| Weighted-average interest rate of loans with interest rate reductions - after TDR | 2.28 | 2.33 | 2.99 | 2.81 | 2.73 | 2.65 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR | 19 | 17 | 24 | 25 | 22 | 22 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - after TDR | 38 | 33 | 38 | 37 | 38 | 36 |
| Charge-offs recognized upon permanent modification | \$ - | \$ 1 | \$ 1 | \$ 4 | \$ 1 | \$ 5 |
| Principal deferred | 6 | 7 | 7 | 13 | 13 | 20 |
| Principal forgiven | 1 | - | 12 | 19 | 13 | 19 |
| Balance of loans that redefaulted within one year of permanent modification ^(a) | \$ 13 | \$ 5 | \$ 29 | \$ 38 | \$ 42 | \$ 43 |

| Nine months ended September 30, (in millions, except weighted-average data and number of loans) | Home equity | | Residential mortgage | | Total residential real estate - excluding PCI | |
|--|-------------|-------|----------------------|--------|--|--------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Weighted-average interest rate of loans with interest rate reductions - before TDR | 5.08% | 5.24% | 5.66% | 5.74% | 5.43% | 5.57% |
| Weighted-average interest rate of loans with interest rate reductions - after TDR | 2.40 | 2.41 | 2.94 | 2.76 | 2.73 | 2.65 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR | 18 | 18 | 25 | 25 | 22 | 22 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - after TDR | 38 | 33 | 38 | 37 | 38 | 36 |
| Charge-offs recognized upon permanent modification | \$ 1 | \$ 3 | \$ 3 | \$ 9 | \$ 4 | \$ 12 |
| Principal deferred | 18 | 20 | 26 | 45 | 44 | 65 |
| Principal forgiven | 5 | 2 | 37 | 52 | 42 | 54 |
| Balance of loans that redefaulted within one year of permanent modification ^(a) | \$ 31 | \$ 14 | \$ 72 | \$ 102 | \$ 103 | \$ 116 |

(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. Defaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At September 30, 2016, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 9 years for home equity and 11 years for residential mortgages. 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 September 30, 2016, and December 31, 2015, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of \$1.0 billion and \$1.2 billion, 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, business banking and student loans.

| | Auto | | Business banking | | Student and other | | Total other consumer | |
|--|------------------|------------------|------------------|------------------|----------------------|----------------------|----------------------|----------------------|
| (in millions, except ratios) | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Loan delinquency^(a) | | | | | | | | |
| Current | \$ 63,815 | \$ 59,442 | \$ 21,954 | \$ 20,887 | \$ 8,644 | \$ 9,405 | \$ 94,413 | \$ 89,734 |
| 30-119 days past due | 688 | 804 | 212 | 215 | 380 | 445 | 1,280 | 1,464 |
| 120 or more days past due | 9 | 9 | 126 | 106 | 227 | 246 | 362 | 361 |
| Total retained loans | \$ 64,512 | \$ 60,255 | \$ 22,292 | \$ 21,208 | \$ 9,251 | \$ 10,096 | \$ 96,055 | \$ 91,559 |
| % of 30+ days past due to total retained loans | 1.08% | 1.35% | 1.52% | 1.51% | 1.58% ^(d) | 1.63% ^(d) | 1.23% ^(d) | 1.42% ^(d) |
| 90 or more days past due and still accruing ^(b) | \$ — | \$ — | \$ — | \$ — | \$ 259 | \$ 290 | \$ 259 | \$ 290 |
| Nonaccrual loans | 212 | 116 | 286 | 263 | 211 | 242 | 709 | 621 |
| Geographic region | | | | | | | | |
| California | \$ 7,837 | \$ 7,186 | \$ 4,031 | \$ 3,530 | \$ 951 | \$ 1,051 | \$ 12,819 | \$ 11,767 |
| New York | 3,970 | 3,874 | 3,392 | 3,359 | 1,202 | 1,224 | 8,564 | 8,457 |
| Illinois | 3,921 | 3,678 | 1,582 | 1,459 | 608 | 679 | 6,111 | 5,816 |
| Texas | 6,866 | 6,457 | 2,715 | 2,622 | 761 | 839 | 10,342 | 9,918 |
| Florida | 3,343 | 2,843 | 1,046 | 941 | 484 | 516 | 4,873 | 4,300 |
| New Jersey | 2,026 | 1,998 | 540 | 500 | 326 | 366 | 2,892 | 2,864 |
| Washington | 1,207 | 1,135 | 279 | 264 | 198 | 212 | 1,684 | 1,611 |
| Arizona | 2,215 | 2,033 | 1,251 | 1,205 | 212 | 236 | 3,678 | 3,474 |
| Michigan | 1,514 | 1,550 | 1,309 | 1,361 | 369 | 415 | 3,192 | 3,326 |
| Ohio | 2,269 | 2,340 | 1,359 | 1,363 | 509 | 559 | 4,137 | 4,262 |
| All other | 29,344 | 27,161 | 4,788 | 4,604 | 3,631 | 3,999 | 37,763 | 35,764 |
| Total retained loans | \$ 64,512 | \$ 60,255 | \$ 22,292 | \$ 21,208 | \$ 9,251 | \$ 10,096 | \$ 96,055 | \$ 91,559 |
| Loans by risk ratings^(c) | | | | | | | | |
| Noncriticized | \$ 12,276 | \$ 11,277 | \$ 16,563 | \$ 15,505 | NA | NA | \$ 28,839 | \$ 26,782 |
| Criticized performing | 188 | 76 | 761 | 815 | NA | NA | 949 | 891 |
| Criticized nonaccrual | 98 | — | 236 | 210 | NA | NA | 334 | 210 |

- (a) Student loan delinquency classifications included loans insured by U.S. government agencies under the FFELP as follows: current included \$3.5 billion and \$3.8 billion; 30-119 days past due included \$250 million and \$299 million; and 120 or more days past due included \$211 million and \$227 million at September 30, 2016, and December 31, 2015, respectively.
- (b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.
- (c) 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.
- (d) September 30, 2016, and December 31, 2015, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of \$461 million and \$526 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

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) | September 30, 2016 | December 31, 2015 |
|---|-----------------------|----------------------|
| Impaired loans | | |
| With an allowance | \$ 648 | \$ 527 |
| Without an allowance ^(a) | 30 | 31 |
| Total impaired loans^{(b)(c)} | \$ 678 | \$ 558 |
| Allowance for loan losses related to impaired loans | \$ 141 | \$ 118 |
| Unpaid principal balance of impaired loans ^(d) | 790 | 668 |
| Impaired loans on nonaccrual status | 551 | 449 |

- (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 \$683 million and \$543 million for the three months ended September 30, 2016 and 2015, respectively, and \$626 million and \$565 million for the nine months ended September 30, 2016 and 2015, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the three and nine months ended September 30, 2016 and 2015.
- (d) Represents the contractual amount of principal owed at September 30, 2016, and December 31, 2015. 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 2015 Annual Report for further information on other consumer loans modified in TDRs.

The following table provides information about the Firm's other consumer loans modified in TDRs. New TDRs were not material for the three and nine months ended September 30, 2016 and 2015.

| (in millions) | September 30, 2016 | December 31, 2015 |
|--|-----------------------|----------------------|
| Loans modified in TDRs ^{(a)(b)} | \$ 386 | \$ 384 |
| TDRs on nonaccrual status | 259 | 275 |

- (a) The impact of these modifications was not material to the Firm for the three and nine months ended September 30, 2016 and 2015.
- (b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of September 30, 2016, and December 31, 2015, 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 2015 Annual Report.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

| | Home equity | | Prime mortgage | | Subprime mortgage | | Option ARMs | | Total PCI | |
|--|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| (in millions, except ratios) | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Carrying value ^(a) | \$13,448 | \$14,989 | \$ 7,919 | \$ 8,893 | \$ 3,021 | \$ 3,263 | \$12,657 | \$13,853 | \$37,045 | \$40,998 |
| Related allowance for loan losses ^(b) | 1,708 | 1,708 | 861 | 985 | — | — | 49 | 49 | 2,618 | 2,742 |
| Loan delinquency (based on unpaid principal balance) | | | | | | | | | | |
| Current | \$12,970 | \$14,387 | \$ 7,100 | \$ 7,894 | \$ 3,065 | \$ 3,232 | \$11,445 | \$12,370 | \$34,580 | \$37,883 |
| 30–149 days past due | 279 | 322 | 350 | 424 | 389 | 439 | 571 | 711 | 1,589 | 1,896 |
| 150 or more days past due | 510 | 633 | 494 | 601 | 260 | 380 | 993 | 1,272 | 2,257 | 2,886 |
| Total loans | \$13,759 | \$15,342 | \$ 7,944 | \$ 8,919 | \$ 3,714 | \$ 4,051 | \$13,009 | \$14,353 | \$38,426 | \$42,665 |
| % of 30+ days past due to total loans | 5.73% | 6.22% | 10.62% | 11.49% | 17.47% | 20.22% | 12.02% | 13.82% | 10.01% | 11.21% |
| Current estimated LTV ratios (based on unpaid principal balance)^{(c)(d)} | | | | | | | | | | |
| Greater than 125% and refreshed FICO scores: | | | | | | | | | | |
| Equal to or greater than 660 | \$ 89 | \$ 153 | \$ 6 | \$ 10 | \$ 6 | \$ 10 | \$ 11 | \$ 19 | \$ 112 | \$ 192 |
| Less than 660 | 50 | 80 | 19 | 28 | 33 | 55 | 23 | 36 | 125 | 199 |
| 101% to 125% and refreshed FICO scores: | | | | | | | | | | |
| Equal to or greater than 660 | 649 | 942 | 64 | 120 | 46 | 77 | 98 | 166 | 857 | 1,305 |
| Less than 660 | 305 | 444 | 94 | 152 | 152 | 220 | 164 | 239 | 715 | 1,055 |
| 80% to 100% and refreshed FICO scores: | | | | | | | | | | |
| Equal to or greater than 660 | 2,119 | 2,709 | 520 | 816 | 248 | 331 | 653 | 977 | 3,540 | 4,833 |
| Less than 660 | 914 | 1,136 | 436 | 614 | 496 | 643 | 744 | 1,050 | 2,590 | 3,443 |
| Lower than 80% and refreshed FICO scores: | | | | | | | | | | |
| Equal to or greater than 660 | 6,678 | 6,724 | 4,082 | 4,243 | 915 | 863 | 6,847 | 7,073 | 18,522 | 18,903 |
| Less than 660 | 2,198 | 2,265 | 2,312 | 2,438 | 1,635 | 1,642 | 3,858 | 4,065 | 10,003 | 10,410 |
| No FICO/LTV available | 757 | 889 | 411 | 498 | 183 | 210 | 611 | 728 | 1,962 | 2,325 |
| Total unpaid principal balance | \$13,759 | \$15,342 | \$ 7,944 | \$ 8,919 | \$ 3,714 | \$ 4,051 | \$13,009 | \$14,353 | \$38,426 | \$42,665 |
| Geographic region (based on unpaid principal balance) | | | | | | | | | | |
| California | \$ 8,246 | \$ 9,205 | \$ 4,589 | \$ 5,172 | \$ 927 | \$ 1,005 | \$ 7,378 | \$ 8,108 | \$21,140 | \$23,490 |
| New York | 724 | 788 | 528 | 580 | 373 | 400 | 740 | 813 | 2,365 | 2,581 |
| Illinois | 327 | 358 | 235 | 263 | 181 | 196 | 289 | 333 | 1,032 | 1,150 |
| Texas | 193 | 224 | 83 | 94 | 219 | 243 | 66 | 75 | 561 | 636 |
| Florida | 1,348 | 1,479 | 519 | 586 | 341 | 373 | 1,063 | 1,183 | 3,271 | 3,621 |
| New Jersey | 289 | 310 | 217 | 238 | 127 | 139 | 419 | 470 | 1,052 | 1,157 |
| Washington | 708 | 819 | 173 | 194 | 71 | 81 | 303 | 339 | 1,255 | 1,433 |
| Arizona | 253 | 281 | 131 | 143 | 70 | 76 | 188 | 203 | 642 | 703 |
| Michigan | 39 | 44 | 126 | 141 | 103 | 113 | 133 | 150 | 401 | 448 |
| Ohio | 15 | 17 | 41 | 45 | 58 | 62 | 53 | 61 | 167 | 185 |
| All other | 1,617 | 1,817 | 1,302 | 1,463 | 1,244 | 1,363 | 2,377 | 2,618 | 6,540 | 7,261 |
| Total unpaid principal balance | \$13,759 | \$15,342 | \$ 7,944 | \$ 8,919 | \$ 3,714 | \$ 4,051 | \$13,009 | \$14,353 | \$38,426 | \$42,665 |

- (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 tables set forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of September 30, 2016, and December 31, 2015.

| (in millions, except ratios) | Total loans | | Total 30+ day delinquency rate | |
|--|------------------|------------------|--------------------------------|--------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| HELOCs: ^(a) | | | | |
| Within the revolving period ^(b) | \$ 2,754 | \$ 5,000 | 3.81% | 4.10% |
| Beyond the revolving period ^(c) | 7,265 | 6,252 | 3.98 | 4.46 |
| HELOANS | 494 | 582 | 4.86 | 5.33 |
| Total | \$ 10,513 | \$ 11,834 | 3.98% | 4.35% |

(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 and nine months ended September 30, 2016 and 2015, 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 September 30, | | Nine months ended September 30, | |
| | 2016 | 2015 | 2016 | 2015 |
| Beginning balance | \$ 12,301 | \$ 13,741 | \$ 13,491 | \$ 14,592 |
| Accretion into interest income | (382) | (424) | (1,184) | (1,290) |
| Changes in interest rates on variable-rate loans | 42 | 3 | 143 | 21 |
| Other changes in expected cash flows ^(a) | 291 | 511 | (198) | 508 |
| Reclassification from nonaccretable difference ^(b) | — | 90 | — | 90 |
| Balance at September 30 | \$ 12,252 | \$ 13,921 | \$ 12,252 | \$ 13,921 |
| Accretable yield percentage | 4.33% | 4.22% | 4.35% | 4.18% |

(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.

(b) Reclassifications from nonaccretable difference in the three and nine months ended September 30, 2015 were driven by continued improvement in home prices and delinquencies, as well as increased granularity in the impairment estimates.

Active and suspended foreclosure

At September 30, 2016, and December 31, 2015, the Firm had PCI residential real estate loans with an unpaid principal balance of \$1.9 billion and \$2.3 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) | September 30, 2016 | December 31, 2015 |
|---|--------------------|-------------------|
| Loan delinquency | | |
| Current and less than 30 days past due and still accruing | \$ 131,311 | \$ 129,502 |
| 30-89 days past due and still accruing | 1,041 | 941 |
| 90 or more days past due and still accruing | 994 | 944 |
| Total retained credit card loans | \$ 133,346 | \$ 131,387 |
| Loan delinquency ratios | | |
| % of 30+ days past due to total retained loans | 1.53% | 1.43% |
| % of 90+ days past due to total retained loans | 0.75 | 0.72 |
| Credit card loans by geographic region | | |
| California | \$ 19,218 | \$ 18,802 |
| Texas | 12,376 | 11,847 |
| New York | 11,606 | 11,360 |
| Florida | 8,005 | 7,806 |
| Illinois | 7,752 | 7,655 |
| New Jersey | 5,934 | 5,879 |
| Ohio | 4,627 | 4,700 |
| Pennsylvania | 4,496 | 4,533 |
| Michigan | 3,548 | 3,562 |
| Colorado | 3,521 | 3,399 |
| All other | 52,263 | 51,844 |
| Total retained credit card loans | \$ 133,346 | \$ 131,387 |
| Percentage of portfolio based on carrying value with estimated refreshed FICO scores^(a) | | |
| Equal to or greater than 660 | 84.5% | 84.4% |
| Less than 660 | 14.1 | 13.1 |
| No FICO available | 1.4 | 2.5 |

(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. The prior period amounts have been revised to conform with the current presentation.

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 2015 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) | September 30, 2016 | December 31, 2015 |
|--|-----------------------|----------------------|
| Impaired credit card loans with an allowance^{(a)(b)} | | |
| Credit card loans with modified payment terms ^(c) | \$ 1,117 | \$ 1,286 |
| Modified credit card loans that have reverted to pre-modification payment terms ^(d) | 147 | 179 |
| Total impaired credit card loans^(e) | \$ 1,264 | \$ 1,465 |
| Allowance for loan losses related to impaired credit card loans | \$ 363 | \$ 460 |

- (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 September 30, 2016, and December 31, 2015, \$95 million and \$113 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 \$52 million and \$66 million at September 30, 2016, and December 31, 2015, 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 September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|----------|------------------------------------|----------|
| | 2016 | 2015 | 2016 | 2015 |
| Average impaired credit card loans | \$ 1,283 | \$ 1,620 | \$ 1,349 | \$ 1,775 |
| Interest income on impaired credit card loans | 15 | 20 | 48 | 64 |

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 \$162 million and \$154 million, for the three months ended September 30, 2016 and 2015, respectively, and \$462 million and \$483 million for the nine months ended September 30, 2016 and 2015, respectively. For additional information about credit card loan modifications, see Note 14 of JPMorgan Chase's 2015 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 September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|--------|------------------------------------|--------|
| | 2016 | 2015 | 2016 | 2015 |
| Weighted-average interest rate of loans - before TDR | 15.60% | 15.09% | 15.56% | 15.13% |
| Weighted-average interest rate of loans - after TDR | 4.66 | 4.35 | 4.76 | 4.30 |
| Loans that redefaulted within one year of modification ^(a) | \$ 20 | \$ 23 | \$ 57 | \$ 65 |

- (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 28.73% and 25.61% as of September 30, 2016, and December 31, 2015, 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 2015 Annual Report.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

| (in millions, except ratios) | Commercial and industrial | | Real estate | | Financial institutions | | Government agencies | | Other ^(d) | | Total retained loans | |
|--|---------------------------|------------------|------------------|-----------------|------------------------|-----------------|---------------------|-----------------|----------------------|------------------|----------------------|------------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Loans by risk ratings | | | | | | | | | | | | |
| Investment-grade | \$ 67,142 | \$ 62,150 | \$ 86,511 | \$ 74,330 | \$ 24,954 | \$ 21,786 | \$ 14,960 | \$ 11,363 | \$ 97,218 | \$ 98,107 | \$ 290,785 | \$ 267,736 |
| Noninvestment-grade: | | | | | | | | | | | | |
| Noncriticized | 48,343 | 45,632 | 16,655 | 17,008 | 7,987 | 7,667 | 447 | 256 | 12,385 | 11,390 | 85,817 | 81,953 |
| Criticized performing | 6,486 | 4,542 | 867 | 1,251 | 175 | 320 | 6 | 7 | 162 | 253 | 7,696 | 6,373 |
| Criticized nonaccrual | 1,637 | 608 | 206 | 231 | 18 | 10 | — | — | 290 | 139 | 2,151 | 988 |
| Total noninvestment-grade | 56,466 | 50,782 | 17,728 | 18,490 | 8,180 | 7,997 | 453 | 263 | 12,837 | 11,782 | 95,664 | 89,314 |
| Total retained loans | \$123,608 | \$112,932 | \$104,239 | \$92,820 | \$33,134 | \$29,783 | \$15,413 | \$11,626 | \$110,055 | \$109,889 | \$386,449 | \$357,050 |
| % of total criticized exposure to total retained loans | 6.57% | 4.56% | 1.03% | 1.60% | 0.58% | 1.11% | 0.04% | 0.06% | 0.41% | 0.36% | 2.55% | 2.06% |
| % of criticized nonaccrual to total retained loans | 1.32 | 0.54 | 0.20 | 0.25 | 0.05 | 0.03 | — | — | 0.26 | 0.13 | 0.56 | 0.28 |
| Loans by geographic distribution^(a) | | | | | | | | | | | | |
| Total non-U.S. | \$ 33,799 | \$ 30,063 | \$ 3,970 | \$ 3,003 | \$ 16,937 | \$ 17,166 | \$ 3,948 | \$ 1,788 | \$ 42,604 | \$ 42,031 | \$ 101,258 | \$ 94,051 |
| Total U.S. | 89,809 | 82,869 | 100,269 | 89,817 | 16,197 | 12,617 | 11,465 | 9,838 | 67,451 | 67,858 | 285,191 | 262,999 |
| Total retained loans | \$123,608 | \$112,932 | \$104,239 | \$92,820 | \$33,134 | \$29,783 | \$15,413 | \$11,626 | \$110,055 | \$109,889 | \$386,449 | \$357,050 |
| Loan delinquency^(b) | | | | | | | | | | | | |
| Current and less than 30 days past due and still accruing | \$121,674 | \$112,058 | \$104,009 | \$92,381 | \$33,039 | \$29,713 | \$15,410 | \$11,565 | \$108,755 | \$108,734 | \$382,887 | \$354,451 |
| 30–89 days past due and still accruing | 178 | 259 | 24 | 193 | 59 | 49 | — | 55 | 951 | 988 | 1,212 | 1,544 |
| 90 or more days past due and still accruing ^(c) | 119 | 7 | — | 15 | 18 | 11 | 3 | 6 | 59 | 28 | 199 | 67 |
| Criticized nonaccrual | 1,637 | 608 | 206 | 231 | 18 | 10 | — | — | 290 | 139 | 2,151 | 988 |
| Total retained loans | \$123,608 | \$112,932 | \$104,239 | \$92,820 | \$33,134 | \$29,783 | \$15,413 | \$11,626 | \$110,055 | \$109,889 | \$386,449 | \$357,050 |

(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 2015 Annual Report.

(c) Represents loans that are considered well-collateralized and therefore still accruing interest.

(d) Other includes: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16 of JPMorgan Chase's 2015 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 2015 Annual Report.

| (in millions, except ratios) | Multifamily | | Commercial lessors | | Commercial construction and development | | Other | | Total real estate loans | |
|--|--------------|--------------|--------------------|--------------|---|--------------|--------------|--------------|-------------------------|--------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Real estate retained loans | \$ 65,006 | \$ 60,290 | \$ 24,415 | \$ 20,062 | \$ 5,871 | \$ 4,920 | \$ 8,947 | \$ 7,548 | \$ 104,239 | \$ 92,820 |
| Criticized exposure | 519 | 520 | 442 | 844 | 93 | 43 | 19 | 75 | 1,073 | 1,482 |
| % of total criticized exposure to total real estate retained loans | 0.80% | 0.86% | 1.81% | 4.21% | 1.58% | 0.87% | 0.21% | 0.99% | 1.03% | 1.60% |
| Criticized nonaccrual | \$ 104 | \$ 85 | \$ 99 | \$ 100 | \$ 1 | \$ 1 | \$ 2 | \$ 45 | \$ 206 | \$ 231 |
| % of criticized nonaccrual loans to total real estate retained loans | 0.16% | 0.14% | 0.41% | 0.50% | 0.02% | 0.02% | 0.02% | 0.60% | 0.20% | 0.25% |

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 2015 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 | |
|---|---------------------------|---------------|---------------|---------------|------------------------|--------------|---------------------|--------------|---------------|---------------|----------------------|-----------------|
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Impaired loans | | | | | | | | | | | | |
| With an allowance | \$ 1,249 | \$ 522 | \$ 135 | \$ 148 | \$ 17 | \$ 10 | \$ — | \$ — | \$ 176 | \$ 46 | \$ 1,577 | \$ 726 |
| Without an allowance ^(a) | 459 | 98 | 82 | 106 | — | — | — | — | 115 | 94 | 656 | 298 |
| Total impaired loans | \$ 1,708 | \$ 620 | \$ 217 | \$ 254 | \$ 17 | \$ 10 | \$ — | \$ — | \$ 291 | \$ 140 | \$ 2,233 | \$ 1,024 |
| Allowance for loan losses related to impaired loans | \$ 400 | \$ 220 | \$ 17 | \$ 27 | \$ 3 | \$ 3 | \$ — | \$ — | \$ 70 | \$ 24 | \$ 490 | \$ 274 |
| Unpaid principal balance of impaired loans ^(b) | 1,965 | 669 | 314 | 363 | 19 | 13 | — | — | 309 | 164 | 2,607 | 1,209 |

(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 September 30, 2016, and December 31, 2015. 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 September 30, | | Nine months ended September 30, | |
|----------------------------|----------------------------------|---------------|---------------------------------|---------------|
| | 2016 | 2015 | 2016 | 2015 |
| Commercial and industrial | \$ 1,489 | \$ 559 | \$ 1,437 | \$ 388 |
| Real estate | 210 | 261 | 227 | 257 |
| Financial institutions | 16 | 12 | 13 | 14 |
| Government agencies | — | — | — | 1 |
| Other | 213 | 122 | 197 | 114 |
| Total^(a) | \$ 1,928 | \$ 954 | \$ 1,874 | \$ 774 |

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the three and nine months ended September 30, 2016 and 2015.

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 \$600 million and \$208 million as of September 30, 2016, and December 31, 2015, respectively.

Note 14 – 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 2015 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.

| Nine months ended September 30, (in millions) | 2016 | | | | 2015 | | | |
|--|---------------------------------------|-----------------------|-------------------|-------------------|---------------------------------------|-----------------------|-------------------|-------------------|
| | 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, | \$ 5,806 | \$ 3,434 | \$ 4,315 | \$ 13,555 | 7,050 | \$ 3,439 | \$ 3,696 | \$ 14,185 |
| Gross charge-offs | 1,071 | 2,803 | 291 | 4,165 | 1,269 | 2,626 | 46 | 3,941 |
| Gross recoveries | (448) | (275) | (30) | (753) | (577) | (278) | (64) | (919) |
| Net charge-offs/(recoveries) | 623 | 2,528 | 261 | 3,412 | 692 | 2,348 | (18) | 3,022 |
| Write-offs of PCI loans ^(a) | 124 | — | — | 124 | 162 | — | — | 162 |
| Provision for loan losses | 578 | 2,978 | 628 | 4,184 | (346) | 2,348 | 461 | 2,463 |
| Other | — | — | 1 | 1 | (1) | (5) | 8 | 2 |
| Ending balance at September 30, | \$ 5,637 | \$ 3,884 | \$ 4,683 | \$ 14,204 | \$ 5,849 | \$ 3,434 | \$ 4,183 | \$ 13,466 |
| Allowance for loan losses by impairment methodology | | | | | | | | |
| Asset-specific ^(b) | \$ 352 | \$ 363 ^(c) | \$ 490 | \$ 1,205 | \$ 359 | \$ 485 ^(c) | \$ 281 | \$ 1,125 |
| Formula-based | 2,667 | 3,521 | 4,193 | 10,381 | 2,702 | 2,949 | 3,902 | 9,553 |
| PCI | 2,618 | — | — | 2,618 | 2,788 | — | — | 2,788 |
| Total allowance for loan losses | \$ 5,637 | \$ 3,884 | \$ 4,683 | \$ 14,204 | \$ 5,849 | \$ 3,434 | \$ 4,183 | \$ 13,466 |
| Loans by impairment methodology | | | | | | | | |
| Asset-specific | \$ 9,145 | \$ 1,264 | \$ 2,233 | \$ 12,642 | \$ 9,817 | \$ 1,563 | \$ 1,121 | \$ 12,501 |
| Formula-based | 317,208 | 132,082 | 384,213 | 833,503 | 279,679 | 124,071 | 345,802 | 749,552 |
| PCI | 37,045 | — | 3 | 37,048 | 42,236 | — | 4 | 42,240 |
| Total retained loans | \$ 363,398 | \$ 133,346 | \$ 386,449 | \$ 883,193 | \$ 331,732 | \$ 125,634 | \$ 346,927 | \$ 804,293 |
| Impaired collateral-dependent loans | | | | | | | | |
| Net charge-offs | \$ 63 | \$ — | \$ 7 | \$ 70 | \$ 84 | \$ — | \$ 2 | \$ 86 |
| Loans measured at fair value of collateral less cost to sell | 2,371 | — | 346 | 2,717 | 2,653 | — | 325 | 2,978 |
| Allowance for lending-related commitments | | | | | | | | |
| Beginning balance at January 1, | \$ 14 | \$ — | \$ 772 | \$ 786 | \$ 13 | \$ — | \$ 609 | \$ 622 |
| Provision for lending-related commitments | — | — | 313 | 313 | 1 | — | 112 | 113 |
| Other | — | — | 1 | 1 | — | — | — | — |
| Ending balance at September 30, | \$ 14 | \$ — | \$ 1,086 | \$ 1,100 | \$ 14 | \$ — | \$ 721 | \$ 735 |
| Allowance for lending-related commitments by impairment methodology | | | | | | | | |
| Asset-specific | \$ — | \$ — | \$ 162 | \$ 162 | \$ — | \$ — | \$ 69 | \$ 69 |
| Formula-based | 14 | — | 924 | 938 | 14 | — | 652 | 666 |
| Total allowance for lending-related commitments | \$ 14 | \$ — | \$ 1,086 | \$ 1,100 | \$ 14 | \$ — | \$ 721 | \$ 735 |
| Lending-related commitments by impairment methodology | | | | | | | | |
| Asset-specific | \$ — | \$ — | \$ 503 | \$ 503 | \$ — | \$ — | \$ 176 | \$ 176 |
| Formula-based | 59,990 | 549,634 | 368,484 | 978,108 | 60,005 | 526,433 | 354,172 | 940,610 |
| Total lending-related commitments | \$ 59,990 | \$ 549,634 | \$ 368,987 | \$ 978,611 | \$ 60,005 | \$ 526,433 | \$ 354,348 | \$ 940,786 |

(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 15 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1 of JPMorgan Chase's 2015 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 | 142 |
| | Mortgage securitization trusts | Servicing and securitization of both originated and purchased residential mortgages | 142–144 |
| CIB | Mortgage and other securitization trusts | Securitization of both originated and purchased residential and commercial mortgages, and student loans | 142–144 |
| | Multi-seller conduits | Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs | 144 |
| | Investor intermediation activities: | | |
| | Municipal bond vehicles | | 144–145 |

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 145 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 2015 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 146 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 2015 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 147 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and page 147 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 |
| September 30, 2016 (in millions) | | | | | | |
| Securitization-related^(a) | | | | | | |
| Residential mortgage: | | | | | | |
| Prime/Alt-A and option ARMs | \$ 80,226 | \$ 4,749 | \$ 59,790 | \$ 204 | \$ 1,444 | \$ 1,648 |
| Subprime | 22,300 | 5 | 20,594 | 78 | — | 78 |
| Commercial and other ^(b) | 107,288 | 107 | 73,454 | 612 | 1,945 | 2,557 |
| Total | \$ 209,814 | \$ 4,861 | \$ 153,838 | \$ 894 | \$ 3,389 | \$ 4,283 |

| | 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, 2015 (in millions) | | | | | | |
| Securitization-related^(a) | | | | | | |
| Residential mortgage: | | | | | | |
| Prime/Alt-A and option ARMs | \$ 85,687 | \$ 1,400 | \$ 66,708 | \$ 394 | \$ 1,619 | \$ 2,013 |
| Subprime | 24,389 | 64 | 22,549 | 109 | — | 109 |
| Commercial and other ^(b) | 123,474 | 107 | 80,319 | 447 | 3,451 | 3,898 |
| Total | \$ 233,550 | \$ 1,571 | \$ 169,576 | \$ 950 | \$ 5,070 | \$ 6,020 |

- (a) Excludes U.S. government agency securitizations and re-securitizations, which are not Firm-sponsored. See page 147 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. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
- (c) Excludes the following: retained servicing (see Note 16 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 5 for further information on derivatives); senior and subordinated securities of \$34 million and \$48 million, respectively, at September 30, 2016, and \$163 million and \$73 million, respectively, at December 31, 2015, which the Firm purchased in connection with CIB's secondary market-making activities.
- (d) Includes interests held in re-securitization transactions.
- (e) As of September 30, 2016, and December 31, 2015, 65% and 76%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of \$1.6 billion and \$1.9 billion of investment-grade and \$68 million and \$93 million of noninvestment-grade retained interests at September 30, 2016, and December 31, 2015, respectively. The retained interests in commercial and other securitizations trusts consisted of \$2.3 billion and \$3.7 billion of investment-grade and \$253 million and \$198 million of noninvestment-grade retained interests at September 30, 2016, and December 31, 2015, respectively.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loan 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 2015 Annual Report. See the table on page 146 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 2015 Annual Report. See the table on page 146 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 2015 Annual Report.

During the three months ended September 30, 2016 and 2015, the Firm transferred \$1.2 billion and \$6.6 billion, respectively, of securities to agency VIEs, and \$503 million and \$50 million, respectively, of securities to private-label VIEs.

During the nine months ended September 30, 2016 and 2015, the Firm transferred \$7.6 billion and \$16.8 billion, respectively, of securities to agency VIEs, and \$647 million and \$777 million, respectively, of securities to private-label VIEs.

As of September 30, 2016, and December 31, 2015, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were \$2.4 billion and \$2.2 billion, respectively. At September 30, 2016, and December 31, 2015, the Firm held approximately \$1.3 billion and \$4.6 billion, respectively, of interests in nonconsolidated agency re-securitization entities. The Firm's exposure to non-consolidated private-label re-securitization entities as of September 30, 2016, and December 31, 2015 was not material. As of September 30, 2016, and December 31, 2015, the Firm did not consolidate any agency re-securitizations. As of September 30, 2016, and December 31, 2015, the Firm consolidated an insignificant amount of assets and liabilities of Firm-sponsored private-label 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 2015 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 and \$15.7 billion of the commercial paper issued by the Firm-administered multi-seller conduits at September 30, 2016, and December 31, 2015, respectively. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. 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 portion of these commitments was \$9.1 billion and \$5.6 billion at September 30, 2016, and December 31, 2015, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 21.

VIEs associated with investor intermediation activities

Municipal bond vehicles

For a more detailed description of JPMorgan Chase's principal involvement with municipal bond vehicles, see Note 16 of JPMorgan Chase's 2015 Annual Report.

The Firm's exposure to nonconsolidated municipal bond VIEs at September 30, 2016, and December 31, 2015, including the ratings profile of the VIEs' assets, was as follows.

| (in millions) | Fair value of assets held by VIEs | Liquidity facilities | Excess/(deficit) ^(a) | Maximum exposure |
|--|-----------------------------------|----------------------|---------------------------------|------------------|
| Nonconsolidated municipal bond vehicles | | | | |
| September 30, 2016 | \$ 1,916 | \$ 1,136 | \$ 780 | \$ 1,136 |
| December 31, 2015 | 6,937 | 3,794 | 3,143 | 3,794 |

| (in millions, except where otherwise noted) | Ratings profile of VIE assets ^(b) | | | | | Fair value of assets held by VIEs | Wt. avg. expected life of assets (years) |
|---|--|------------|----------|--------------|------------------------|-----------------------------------|--|
| | Investment-grade | | | | Unrated ^(c) | | |
| | AAA to AAA- | AA+ to AA- | A+ to A- | BBB+ to BBB- | | | |
| September 30, 2016 | \$ 474 | \$ 1,195 | \$ 108 | \$ 24 | \$ 115 | \$ 1,916 | 3.7 |
| December 31, 2015 | 1,743 | 4,631 | 448 | 24 | 91 | 6,937 | 4.0 |

(a) Represents the excess of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.

(b) The ratings scale is presented on an S&P-equivalent basis.

(c) These security positions have been defeased by the municipality and no longer carry credit ratings, but are backed by high quality assets such as U.S. treasuries and cash.

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 September 30, 2016, and December 31, 2015.

| September 30, 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 | \$ — | \$ 45,011 | \$ 798 | \$ 45,809 | \$ 33,424 | \$ 18 | \$ 33,442 |
| Firm-administered multi-seller conduits | — | 24,833 | 42 | 24,875 | 3,659 | 31 | 3,690 |
| Municipal bond vehicles | 2,915 | — | 9 | 2,924 | 2,962 | 2 | 2,964 |
| Mortgage securitization entities ^(b) | 73 | 4,742 | 162 | 4,977 | 417 | 563 | 980 |
| Student loan securitization entities | — | 1,747 | 55 | 1,802 | 1,583 | 5 | 1,588 |
| Other | 181 | — | 2,371 | 2,552 | 188 | 119 | 307 |
| Total | \$ 3,169 | \$ 76,333 | \$ 3,437 | \$ 82,939 | \$ 42,233 | \$ 738 | \$ 42,971 |

| December 31, 2015 (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 | \$ — | \$ 47,358 | \$ 718 | \$ 48,076 | \$ 27,906 | \$ 15 | \$ 27,921 |
| Firm-administered multi-seller conduits | — | 24,388 | 37 | 24,425 | 8,724 | 19 | 8,743 |
| Municipal bond vehicles | 2,686 | — | 5 | 2,691 | 2,597 | 1 | 2,598 |
| Mortgage securitization entities ^(b) | 840 | 1,433 | 27 | 2,300 | 777 | 643 | 1,420 |
| Student loan securitization entities | — | 1,925 | 62 | 1,987 | 1,760 | 5 | 1,765 |
| Other | 210 | — | 1,916 | 2,126 | 115 | 126 | 241 |
| Total | \$ 3,736 | \$ 75,104 | \$ 2,765 | \$ 81,605 | \$ 41,879 | \$ 809 | \$ 42,688 |

(a) Excludes intercompany transactions which were 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 \$35.6 billion and \$30.6 billion at September 30, 2016, and December 31, 2015, respectively. The maturities of the long-term beneficial interests as of September 30, 2016, were as follows: \$11.6 billion under one year, \$21.3 billion between one and five years, and \$2.7 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 2015 Annual Report.

Securitization activity

The following table provides information related to the Firm's securitization activities for the three and nine months ended September 30, 2016 and 2015, related to assets held in JPMorgan Chase-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 September 30, | | | | Nine months ended September 30, | | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | 2016 | | 2015 | | 2016 | | 2015 | |
| | Residential mortgage ^(d) | Commercial and other ^(e) | Residential mortgage ^(d) | Commercial and other ^(e) | Residential mortgage ^(d) | Commercial and other ^(e) | Residential mortgage ^(d) | Commercial and other ^(e) |
| Principal securitized | \$ 698 | \$ 3,428 | \$ 971 | \$ 2,982 | \$ 1,111 | \$ 5,786 | \$ 2,663 | \$ 9,033 |
| All cash flows during the period:^(a) | | | | | | | | |
| Proceeds from new securitizations ^(b) | \$ 709 | \$ 3,551 | \$ 972 | \$ 2,995 | \$ 1,122 | \$ 5,924 | \$ 2,674 | \$ 9,053 |
| Servicing fees collected | 111 | 1 | 129 | — | 334 | 2 | 409 | 2 |
| Purchases of previously transferred financial assets (or the underlying collateral) ^(c) | — | — | 1 | — | 37 | — | 2 | — |
| Cash flows received on interests | 121 | 535 | 122 | 172 | 326 | 1,115 | 308 | 379 |

(a) Excludes re-securitization transactions.

(b) For the three and nine months ended September 30, 2016, \$709 million and \$1.1 billion, respectively, of proceeds from residential mortgage securitizations were received as securities classified in level 2 of the fair value hierarchy. For the three and nine months ended September 30, 2016, \$3.6 billion and \$5.9 billion, respectively, of proceeds from commercial mortgage securitizations were received as securities classified in level 2, and \$0 million and \$2 million, respectively, of proceeds were classified as level 3 of the fair value hierarchy. For the three and nine months ended September 30, 2015, \$913 million and \$2.6 billion, respectively, of proceeds from residential mortgage securitizations were received as securities classified in level 2; and for both periods \$59 million of proceeds were classified as level 3 of the fair value hierarchy, respectively. For the three and nine months ended September 30, 2015, \$3.0 billion and \$9.0 billion, respectively, of proceeds from commercial mortgage securitizations were received as securities classified in level 2 and \$5 million and \$43 million, respectively, of proceeds were classified as level 3 of the fair value hierarchy, and no proceeds from commercial mortgage securitization were received as cash. All loans transferred into securitization vehicles during the three and nine months ended September 30, 2016 and 2015, were classified as trading assets; and changes in fair value were recorded in principal transactions revenue. The Firm elected the fair value option for loans pending securitization. The carrying value of these loans accounted for at fair value approximated the proceeds received from securitization.

(c) 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.

(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.

(e) Includes commercial mortgage and student loan securitizations.

Loans and excess MSRs sold to U.S. government-sponsored enterprises, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. government-sponsored enterprises (“U.S. GSEs”). These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 21 of this Form 10-Q, and Note 29 of JPMorgan Chase's 2015 Annual Report for additional information about the Firm's loan sales- and securitization-related indemnifications. See Note 16 for additional information about the impact of the Firm's sale of

certain excess MSRs. The following table summarizes the activities related to loans sold to the U.S. GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|--|----------------------------------|------------------|---------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Carrying value of loans sold | \$ 14,811 | \$ 11,394 | \$ 32,647 | \$ 34,193 |
| Proceeds received from loan sales as cash | 68 | 139 | 306 | 238 |
| Proceeds received from loan sales as securities ^(a) | 14,610 | 11,170 | 32,113 | 33,758 |
| Total proceeds received from loan sales^(b) | \$ 14,678 | \$ 11,309 | \$ 32,419 | \$ 33,996 |
| Gains on loan sales ^(c) | \$ 50 | \$ 61 | \$ 164 | \$ 238 |

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

(b) Excludes the value of MSRs retained upon the sale of loans. Gains on loan sales include the value of MSRs.

(c) 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 21, 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. As of September 30, 2016, and December 31, 2015, the Firm had recorded on its Consolidated balance sheets \$9.9 billion and \$11.1 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, real estate owned resulting from voluntary repurchases of loans was \$163 million and \$343 million as of September 30, 2016, and December 31, 2015, respectively. Substantially all of these loans and REO are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 13 of this Form 10-Q and Note 14 of JPMorgan Chase's 2015 Annual Report.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of September 30, 2016, and December 31, 2015.

| (in millions) | Securitized assets | | 90 days past due | | Liquidation losses | | | |
|--|--------------------|-------------------|------------------|------------------|----------------------------------|-----------------|---------------------------------|-----------------|
| | | | | | Three months ended September 30, | | Nine months ended September 30, | |
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | 2016 | 2015 | 2016 | 2015 |
| Securitized loans^(a) | | | | | | | | |
| Residential mortgage: | | | | | | | | |
| Prime / Alt-A & option ARMs | \$ 59,790 | \$ 66,708 | \$ 6,509 | \$ 8,325 | \$ 275 | \$ 486 | \$ 933 | \$ 1,402 |
| Subprime | 20,594 | 22,549 | 4,379 | 5,448 | 280 | 380 | 898 | 1,105 |
| Commercial and other | 73,454 | 80,319 | 1,324 | 1,808 | 78 | 211 | 564 | 350 |
| Total loans securitized | \$ 153,838 | \$ 169,576 | \$ 12,212 | \$ 15,581 | \$ 633 | \$ 1,077 | \$ 2,395 | \$ 2,857 |

(a) Total assets held in securitization-related SPEs were \$209.8 billion and \$233.6 billion, respectively, at September 30, 2016, and December 31, 2015. The \$153.8 billion and \$169.6 billion, respectively, of loans securitized at September 30, 2016, and December 31, 2015, excluded: \$51.1 billion and \$62.4 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and \$4.9 billion and \$1.6 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated balance sheets at September 30, 2016, and December 31, 2015.

Note 16 – Goodwill and other intangible assets

For a discussion of the accounting policies related to goodwill and other intangible assets, see Note 17 of JPMorgan Chase's 2015 Annual Report.

The following table presents goodwill attributed to the business segments.

| (in millions) | September 30, 2016 | December 31, 2015 |
|------------------------------|-----------------------|----------------------|
| Consumer & Community Banking | \$ 30,806 | \$ 30,769 |
| Corporate & Investment Bank | 6,775 | 6,772 |
| Commercial Banking | 2,861 | 2,861 |
| Asset Management | 6,860 | 6,923 |
| Total goodwill | \$ 47,302 | \$ 47,325 |

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

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|---------------------------------|-------------------------------------|------------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Balance at beginning of period | \$ 47,303 | \$ 47,476 | \$ 47,325 | \$ 47,647 |
| Changes during the period from: | | | | |
| Business combinations | — | 8 | — | 25 |
| Dispositions ^(a) | — | — | (71) | (101) |
| Other ^(b) | (1) | (79) | 48 | (166) |
| Balance at September 30, | \$ 47,302 | \$ 47,405 | \$ 47,302 | \$ 47,405 |

(a) During the nine months ended September 30, 2016, represents AM goodwill, which was disposed of as part of AM sales completed in March 2016. During the nine months ended September 30, 2015, represents Private Equity goodwill, which was disposed of as part of a Private Equity sale completed in January 2015.

(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 274-275 of JPMorgan Chase's 2015 Annual Report.

Goodwill was not impaired at September 30, 2016, or December 31, 2015, nor was goodwill written off due to impairment during the nine months ended September 30, 2016 or 2015.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of the impact of 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 2015 Annual Report and Note 3 of this Form 10-Q.

The following table summarizes MSR activity for the three and nine months ended September 30, 2016 and 2015.

| (in millions, except where otherwise noted) | As of or for the three months ended September 30, | | As of or for the nine months ended September 30, | |
|--|---|-----------------|--|-----------------|
| | 2016 | 2015 | 2016 | 2015 |
| Fair value at beginning of period | \$ 5,072 | \$ 7,571 | \$ 6,608 | \$ 7,436 |
| MSR activity: | | | | |
| Originations of MSRs | 190 | 147 | 410 | 447 |
| Purchase of MSRs | — | (4) | — | 435 |
| Disposition of MSRs ^(a) | (5) | — | (72) | (375) |
| Net additions | 185 | 143 | 338 | 507 |
| Changes due to collection/realization of expected cash flows | (233) | (233) | (713) | (677) |
| Changes in valuation due to inputs and assumptions: | | | | |
| Changes due to market interest rates and other ^(b) | (35) | (677) | (1,230) | (338) |
| Changes in valuation due to other inputs and assumptions: | | | | |
| Projected cash flows (e.g., cost to service) | (21) | (76) | (28) | (103) |
| Discount rates | — | — | 7 | (10) |
| Prepayment model changes and other ^(c) | (31) | (12) | (45) | (99) |
| Total changes in valuation due to other inputs and assumptions | (52) | (88) | (66) | (212) |
| Total changes in valuation due to inputs and assumptions | (87) | (765) | (1,296) | (550) |
| Fair value at September 30, | \$ 4,937 | \$ 6,716 | \$ 4,937 | \$ 6,716 |
| Change in unrealized gains/(losses) included in income related to MSRs held at September 30, | \$ (87) | \$ (765) | \$ (1,296) | \$ (550) |
| Contractual service fees, late fees and other ancillary fees included in income | 523 | 634 | 1,629 | 1,945 |
| Third-party mortgage loans serviced at September 30, (in billions) | 611 | 706 | 611 | 706 |
| Net servicer advances at September 30, (in billions) ^(d) | 5.0 | 6.6 | 5.0 | 6.6 |

(a) For the nine months ended September 30, 2016, predominantly represents 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 and has retained the remaining balance of those SMBS as trading securities. Also includes sales of MSRs for the three months ended September 30, 2016 and nine months ended September 30, 2016 and 2015.

(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 and nine months ended September 30, 2016 and 2015.

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|---|-------------------------------------|--------|------------------------------------|----------|
| | 2016 | 2015 | 2016 | 2015 |
| CCB mortgage fees and related income | | | | |
| Net production revenue | \$ 247 | \$ 176 | \$ 670 | \$ 646 |
| Net mortgage servicing revenue: | | | | |
| Operating revenue: | | | | |
| Loan servicing revenue | 571 | 648 | 1,780 | 2,104 |
| Changes in MSR asset fair value due to collection/realization of expected cash flows | (232) | (232) | (710) | (674) |
| Total operating revenue | 339 | 416 | 1,070 | 1,430 |
| Risk management: | | | | |
| Changes in MSR asset fair value due to market interest rates and other ^(a) | (35) | (677) | (1,230) | (338) |
| Other changes in MSR asset fair value due to other inputs and assumptions in model ^(b) | (52) | (88) | (66) | (212) |
| Change in derivative fair value and other | 125 | 642 | 1,536 | 429 |
| Total risk management | 38 | (123) | 240 | (121) |
| Total net mortgage servicing revenue | 377 | 293 | 1,310 | 1,309 |
| Total CCB mortgage fees and related income | 624 | 469 | 1,980 | 1,955 |
| All other | — | — | — | 2 |
| Mortgage fees and related income | \$ 624 | \$ 469 | \$ 1,980 | \$ 1,957 |

(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 September 30, 2016, and December 31, 2015, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

| (in millions, except rates) | Sep 30, 2016 | Dec 31, 2015 |
|--|-----------------|-----------------|
| Weighted-average prepayment speed assumption ("CPR") | 14.43% | 9.81% |
| Impact on fair value of 10% adverse change | \$ (262) | \$ (275) |
| Impact on fair value of 20% adverse change | (500) | (529) |
| Weighted-average option adjusted spread | 9.87% | 9.54% |
| Impact on fair value of a 100 basis point adverse change | \$ (177) | \$ (258) |
| Impact on fair value of a 200 basis point adverse change | (340) | (498) |

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 17 – Deposits

For further discussion on deposits, see Note 19 of JPMorgan Chase's 2015 Annual Report.

At September 30, 2016, and December 31, 2015, noninterest-bearing and interest-bearing deposits were as follows.

| (in millions) | September 30, 2016 | December 31, 2015 |
|--|-----------------------|----------------------|
| U.S. offices | | |
| Noninterest-bearing | \$ 409,912 | \$ 392,721 |
| Interest-bearing (included \$11,624 and \$10,916 at fair value) ^(a) | 722,294 | 663,004 |
| Total deposits in U.S. offices | 1,132,206 | 1,055,725 |
| Non-U.S. offices | | |
| Noninterest-bearing | 19,397 | 18,921 |
| Interest-bearing (included \$1,367 and \$1,600 at fair value) ^(a) | 224,535 | 205,069 |
| Total deposits in non-U.S. offices | 243,932 | 223,990 |
| Total deposits | \$ 1,376,138 | \$ 1,279,715 |

(a) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4 of JPMorgan Chase's 2015 Annual Report.

Note 18 – Earnings per share

For a discussion of the computation of basic and diluted earnings per share ("EPS"), see Note 24 of JPMorgan Chase's 2015 Annual Report. The following table presents the calculation of basic and diluted EPS for the three and nine months ended September 30, 2016 and 2015.

| (in millions, except per share amounts) | Three months ended September 30, | | Nine months ended September 30, | |
|--|-------------------------------------|-----------------|------------------------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 |
| Basic earnings per share | | | | |
| Net income | \$ 6,286 | \$ 6,804 | \$ 18,006 | \$ 19,008 |
| Less: Preferred stock dividends | 412 | 393 | 1,235 | 1,097 |
| Net income applicable to common equity | 5,874 | 6,411 | 16,771 | 17,911 |
| Less: Dividends and undistributed earnings allocated to participating securities | 127 | 141 | 368 | 413 |
| Net income applicable to common stockholders | \$ 5,747 | \$ 6,270 | \$ 16,403 | \$ 17,498 |
| Total weighted-average basic shares outstanding | 3,597.4 | 3,694.4 | 3,634.4 | 3,709.2 |
| Net income per share | \$ 1.60 | \$ 1.70 | \$ 4.51 | \$ 4.72 |
| Diluted earnings per share | | | | |
| Net income applicable to common stockholders | \$ 5,747 | \$ 6,270 | \$ 16,403 | \$ 17,498 |
| Total weighted-average basic shares outstanding | 3,597.4 | 3,694.4 | 3,634.4 | 3,709.2 |
| Add: Employee stock options, SARs, warrants and PSUs | 32.2 | 31.2 | 29.9 | 33.0 |
| Total weighted-average diluted shares outstanding^(a) | 3,629.6 | 3,725.6 | 3,664.3 | 3,742.2 |
| Net income per share | \$ 1.58 | \$ 1.68 | \$ 4.48 | \$ 4.68 |

(a) 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 19 – 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, and DVA on fair value option elected liabilities.

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 guidance was required to be applied as of the beginning of the fiscal year of adoption by means of a cumulative effect adjustment to the Consolidated balance sheets, which resulted in a reclassification from retained earnings to AOCI.

| As of or for the three months ended September 30, 2016 (in millions) | Unrealized gains/(losses) 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 July 1, 2016 | \$ 3,921 | \$ (161) | \$ (201) | \$ (2,150) | \$ 209 | \$ 1,618 |
| Net change | (160) | 4 | 36 | 42 | (66) | (144) |
| Balance at September 30, 2016 | \$ 3,761 | \$ (157) | \$ (165) | \$ (2,108) | \$ 143 | \$ 1,474 |

| As of or for the three months ended September 30, 2015 (in millions) | Unrealized gains/(losses) 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 July 1, 2015 | \$ 3,443 | \$ (154) | \$ 62 | \$ (2,249) | NA | \$ 1,102 |
| Net change | (291) | (5) | (106) | 51 | NA | (351) |
| Balance at September 30, 2015 | \$ 3,152 | \$ (159) | \$ (44) | \$ (2,198) | NA | \$ 751 |

| As of or for the nine months ended September 30, 2016 (in millions) | Unrealized gains/(losses) 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 | — | — | — | — | 154 | 154 |
| Net change | 1,132 | 5 | (121) | 123 | (11) | 1,128 |
| Balance at September 30, 2016 | \$ 3,761 | \$ (157) | \$ (165) | \$ (2,108) | \$ 143 | \$ 1,474 |

| As of or for the nine months ended September 30, 2015 (in millions) | Unrealized gains/(losses) 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, 2015 | \$ 4,773 | \$ (147) | \$ (95) | \$ (2,342) | NA | \$ 2,189 |
| Net change | (1,621) | (12) | 51 | 144 | NA | (1,438) |
| Balance at September 30, 2015 | \$ 3,152 | \$ (159) | \$ (44) | \$ (2,198) | NA | \$ 751 |

(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.

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

| Three months ended September 30, (in millions) | 2016 | | | 2015 | | |
|---|-----------------|--------------|-----------------|-----------------|---------------|-----------------|
| | 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 | \$ (192) | \$ 72 | \$ (120) | \$ (430) | \$ 160 | \$ (270) |
| Reclassification adjustment for realized (gains)/losses included in net income ^(a) | (64) | 24 | (40) | (33) | 12 | (21) |
| Net change | (256) | 96 | (160) | (463) | 172 | (291) |
| Translation adjustments^(b): | | | | | | |
| Translation | 34 | (12) | 22 | (912) | 340 | (572) |
| Hedges | (30) | 12 | (18) | 908 | (341) | 567 |
| Net change | 4 | — | 4 | (4) | (1) | (5) |
| Cash flow hedges: | | | | | | |
| Net unrealized gains/(losses) arising during the period | (64) | 23 | (41) | (175) | 66 | (109) |
| Reclassification adjustment for realized (gains)/losses included in net income ^(c) | 122 | (45) | 77 | 5 | (2) | 3 |
| Net change | 58 | (22) | 36 | (170) | 64 | (106) |
| Defined benefit pension and OPEB plans: | | | | | | |
| Net gains/(losses) arising during the period | — | — | — | — | — | — |
| Reclassification adjustments included in net income ^(d) : | | | | | | |
| Amortization of net loss | 65 | (24) | 41 | 71 | (27) | 44 |
| Prior service costs/(credits) | (9) | 3 | (6) | (9) | 3 | (6) |
| Foreign exchange and other | 12 | (5) | 7 | 20 | (7) | 13 |
| Net change | 68 | (26) | 42 | 82 | (31) | 51 |
| DVA on fair value option elected liabilities, net change: | (106) | 40 | (66) | NA | NA | NA |
| Total other comprehensive income/(loss) | \$ (232) | \$ 88 | \$ (144) | \$ (555) | \$ 204 | \$ (351) |

| Nine months ended September 30, (in millions) | 2016 | | | 2015 | | |
|--|-----------------|-----------------|-----------------|-------------------|---------------|-------------------|
| | 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 | \$ 1,948 | \$ (731) | \$ 1,217 | \$ (2,548) | \$ 1,008 | \$ (1,540) |
| Reclassification adjustment for realized (gains)/losses included in net income ^(a) | (136) | 51 | (85) | (129) | 48 | (81) |
| Net change | 1,812 | (680) | 1,132 | (2,677) | 1,056 | (1,621) |
| Translation adjustments: | | | | | | |
| Translation ^(b) | 613 | (228) | 385 | (1,645) | 601 | (1,044) |
| Hedges ^(b) | (603) | 223 | (380) | 1,651 | (619) | 1,032 |
| Net change | 10 | (5) | 5 | 6 | (18) | (12) |
| Cash flow hedges: | | | | | | |
| Net unrealized gains/(losses) arising during the period | (418) | 156 | (262) | (104) | 38 | (66) |
| Reclassification adjustment for realized (gains)/losses included in net income ^{(c)(e)} | 225 | (84) | 141 | 187 | (70) | 117 |
| Net change | (193) | 72 | (121) | 83 | (32) | 51 |
| Defined benefit pension and OPEB plans: | | | | | | |
| Net gains/(losses) arising during the period | (15) | 6 | (9) | 101 | (39) | 62 |
| Reclassification adjustments included in net income ^(d) : | | | | | | |
| Amortization of net loss | 193 | (73) | 120 | 212 | (80) | 132 |
| Prior service costs/(credits) | (27) | 10 | (17) | (27) | 10 | (17) |
| Foreign exchange and other | 46 | (17) | 29 | 20 | (53) | (33) |
| Net change | 197 | (74) | 123 | 306 | (162) | 144 |
| DVA on fair value option elected liabilities, net change: | \$ (18) | \$ 7 | (11) | NA | NA | NA |
| Total other comprehensive income/(loss) | \$ 1,808 | \$ (680) | \$ 1,128 | \$ (2,282) | \$ 844 | \$ (1,438) |

(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) In 2015, the Firm reclassified approximately \$150 million of net losses from AOCI to other income because the Firm determined that it is probable that the forecasted interest payment cash flows will not occur. For additional information, see Note 5.

(e) The pre-tax amount is reported in compensation expense in the Consolidated statements of income.

Note 20 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

The Basel Committee's most recent capital framework ("Basel III") for large and internationally active U.S. bank holding companies and banks, including the Firm and its IDI subsidiaries, revised, among other things, the definition of capital and introduced a new CET1 capital requirement; presents two comprehensive methodologies for calculating RWA, a general (Standardized) approach, ("Basel III Standardized") and an advanced approach, ("Basel III Advanced"); and sets out minimum capital ratios and overall capital adequacy standards. 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, as well as 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 regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional.

| JPMorgan Chase & Co. ^(e) | | | | |
|-------------------------------------|-------------------------------------|--------------|---------------------------------|--------------|
| | Basel III Standardized Transitional | | Basel III Advanced Transitional | |
| (in millions, except ratios) | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Regulatory capital | | | | |
| CET1 capital | \$ 181,606 | \$ 175,398 | \$ 181,606 | \$ 175,398 |
| Tier 1 capital ^(a) | 206,430 | 200,482 | 206,430 | 200,482 |
| Total capital | 241,004 | 234,413 | 229,324 | 224,616 |
| Assets | | | | |
| Risk-weighted | 1,480,291 | 1,465,262 | 1,515,177 | 1,485,336 |
| Adjusted average ^(b) | 2,427,423 | 2,358,471 | 2,427,423 | 2,358,471 |
| Capital ratios^(c) | | | | |
| CET1 | 12.3% | 12.0% | 12.0% | 11.8% |
| Tier 1 ^(a) | 13.9 | 13.7 | 13.6 | 13.5 |
| Total | 16.3 | 16.0 | 15.1 | 15.1 |
| Tier 1 leverage ^(d) | 8.5 | 8.5 | 8.5 | 8.5 |

| JPMorgan Chase Bank, N.A. ^(e) | | | | |
|--|-------------------------------------|--------------|---------------------------------|--------------|
| | Basel III Standardized Transitional | | Basel III Advanced Transitional | |
| (in millions, except ratios) | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Regulatory capital | | | | |
| CET1 capital | \$ 176,083 | \$ 168,857 | \$ 176,083 | \$ 168,857 |
| Tier 1 capital ^(a) | 176,375 | 169,222 | 176,375 | 169,222 |
| Total capital | 190,955 | 183,262 | 182,984 | 176,423 |
| Assets | | | | |
| Risk-weighted | 1,319,671 | 1,264,056 | 1,302,659 | 1,249,607 |
| Adjusted average ^(b) | 2,041,246 | 1,910,934 | 2,041,246 | 1,910,934 |
| Capital ratios^(c) | | | | |
| CET1 | 13.3% | 13.4% | 13.5% | 13.5% |
| Tier 1 ^(a) | 13.4 | 13.4 | 13.5 | 13.5 |
| Total | 14.5 | 14.5 | 14.0 | 14.1 |
| Tier 1 leverage ^(d) | 8.6 | 8.9 | 8.6 | 8.9 |

| Chase Bank USA, N.A. ^(e) | | | | |
|-------------------------------------|-------------------------------------|--------------|---------------------------------|--------------|
| (in millions, except ratios) | Basel III Standardized Transitional | | Basel III Advanced Transitional | |
| | Sep 30, 2016 | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 |
| Regulatory capital | | | | |
| CET1 capital | \$ 16,597 | \$ 15,419 | \$ 16,597 | \$ 15,419 |
| Tier 1 capital ^(a) | 16,597 | 15,419 | 16,597 | 15,419 |
| Total capital | 22,602 | 21,418 | 21,247 | 20,069 |
| Assets | | | | |
| Risk-weighted | 106,507 | 105,807 | 184,858 | 181,775 |
| Adjusted average ^(b) | 121,335 | 134,152 | 121,335 | 134,152 |
| Capital ratios^(c) | | | | |
| CET1 | 15.6% | 14.6% | 9.0% | 8.5% |
| Tier 1 ^(a) | 15.6 | 14.6 | 9.0 | 8.5 |
| Total | 21.2 | 20.2 | 11.5 | 11.0 |
| Tier 1 leverage ^(d) | 13.7 | 11.5 | 13.7 | 11.5 |

- (a) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule) acquired after December 31, 2013 which was not material as of September 30, 2016.
- (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.
- (e) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling \$88 million and \$105 million at September 30, 2016, and December 31, 2015, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of \$3.1 billion and \$3.0 billion at September 30, 2016, and December 31, 2015, respectively.

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 September 30, 2016.

| | Minimum capital ratios | | Well-capitalized ratios | |
|-----------------------|------------------------|--------------------|-------------------------|--------------------|
| | BHC ^(a) | IDI ^(b) | BHC ^(c) | IDI ^(d) |
| Capital ratios | | | | |
| CET1 | 6.25% | 5.125% | —% | 6.5% |
| Tier 1 | 7.75 | 6.625 | 6.0 | 8.0 |
| Total | 9.75 | 8.625 | 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 September 30, 2016. Commencing in the first quarter of 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 estimated 4.5% GSIB surcharge as of December 31, 2014 published by the Federal Reserve on July 20, 2015.
- (b) Represents requirements for JPMorgan Chase's banking subsidiaries. The CET1 minimum capital ratio includes 0.625% 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.

As of September 30, 2016, and December 31, 2015, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 21 – 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 2015 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 14 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 September 30, 2016, and December 31, 2015. 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

| By remaining maturity (in millions) | Contractual amount | | | | | Carrying value ^(h) | | | |
|---|---------------------------------|--|---|-----------------------------|-------------------|-------------------------------|-----------------|-----------------|--|
| | September 30, 2016 | | | | | Dec 31, 2015 | Sep 30, 2016 | Dec 31, 2015 | |
| | 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 | | | |
| Lending-related | | | | | | | | | |
| Consumer, excluding credit card: | | | | | | | | | |
| Home equity | \$ 4,272 | \$ 4,628 | \$ 1,038 | \$ 11,874 | \$ 21,812 | \$ 22,756 | \$ — | \$ — | |
| Residential mortgage ^(a) | 14,896 | — | — | — | 14,896 | 12,992 | — | — | |
| Auto | 9,538 | 500 | 160 | 1 | 10,199 | 10,237 | 2 | 2 | |
| Business banking | 11,653 | 676 | 131 | 479 | 12,939 | 12,351 | 12 | 12 | |
| Student and other | 107 | — | — | 37 | 144 | 142 | — | — | |
| Total consumer, excluding credit card | \$ 40,466 | \$ 5,804 | \$ 1,329 | \$ 12,391 | \$ 59,990 | \$ 58,478 | \$ 14 | \$ 14 | |
| Credit card | \$ 549,634 | \$ — | \$ — | \$ — | \$ 549,634 | \$ 515,518 | \$ — | \$ — | |
| Total consumer^(b) | \$ 590,100 | \$ 5,804 | \$ 1,329 | \$ 12,391 | \$ 609,624 | \$ 573,996 | \$ 14 | \$ 14 | |
| Wholesale: | | | | | | | | | |
| Other unfunded commitments to extend credit ^{(c)(d)} | \$ 67,028 | \$ 113,031 | \$ 142,917 | \$ 6,617 | \$ 329,593 | \$ 323,325 | \$ 938 | \$ 649 | |
| Standby letters of credit and other financial guarantees ^{(c)(d)} | 16,571 | 11,482 | 7,148 | 1,046 | 36,247 | 39,133 | 573 | 548 | |
| Other letters of credit ^(c) | 2,955 | 155 | 37 | — | 3,147 | 3,941 | 1 | 2 | |
| Total wholesale^(e) | \$ 86,554 | \$ 124,668 | \$ 150,102 | \$ 7,663 | \$ 368,987 | \$ 366,399 | \$ 1,512 | \$ 1,199 | |
| Total lending-related | \$ 676,654 | \$ 130,472 | \$ 151,431 | \$ 20,054 | \$ 978,611 | \$ 940,395 | \$ 1,526 | \$ 1,213 | |
| Other guarantees and commitments | | | | | | | | | |
| Securities lending indemnification agreements and guarantees ^(f) | \$ 163,855 | \$ — | \$ — | \$ — | \$ 163,855 | \$ 183,329 | \$ — | \$ — | |
| Derivatives qualifying as guarantees | 2,900 | 724 | 10,922 | 39,360 | 53,906 | 53,784 | 230 | 222 | |
| Unsettled reverse repurchase and securities borrowing agreements | 76,810 | — | — | — | 76,810 | 42,482 | — | — | |
| Unsettled repurchase and securities lending agreements | 54,023 | — | — | — | 54,023 | 21,798 | — | — | |
| Loan sale and securitization-related indemnifications: | | | | | | | | | |
| Mortgage repurchase liability | NA | NA | NA | NA | NA | NA | 136 | 148 | |
| Loans sold with recourse | NA | NA | NA | NA | 3,303 | 4,274 | 66 | 82 | |
| Other guarantees and commitments ^(g) | 954 | 2,662 | 1,033 | 1,553 | 6,202 | 5,580 | (72) | (94) | |

(a) Includes certain commitments to purchase loans from correspondents.

(b) Predominantly all consumer lending-related commitments are in the U.S.

(c) At September 30, 2016, and December 31, 2015, reflected the contractual amount net of risk participations totaling \$345 million and \$385 million, respectively, for other unfunded commitments to extend credit; \$10.6 billion and \$11.2 billion, respectively, for standby letters of credit and other financial guarantees; and \$320 million and \$341 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(d) At September 30, 2016, and December 31, 2015, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other non-profit entities of \$10.3 billion and \$12.3 billion, respectively, within other unfunded commitments to extend credit; and \$7.4 billion and \$9.6 billion, respectively, within standby letters of credit and other financial guarantees. Other unfunded commitments to extend credit also include liquidity facilities to nonconsolidated municipal bond VIEs; see Note 15.

(e) At September 30, 2016, and December 31, 2015, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 75% and 77%, respectively.

(f) At September 30, 2016, and December 31, 2015, collateral held by the Firm in support of securities lending indemnification agreements was \$170.3 billion and \$190.6 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) At September 30, 2016, and December 31, 2015, included unfunded commitments of \$49 million and \$50 million, respectively, to third-party private equity funds; and \$1.4 billion and \$871 million, at September 30, 2016, and December 31, 2015, respectively, to other equity investments. These commitments included \$67 million and \$73 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3. In addition, at September 30, 2016, and December 31, 2015, included letters of credit hedged by derivative transactions and managed on a market risk basis of \$4.7 billion and \$4.6 billion, respectively.

(h) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

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.

In the second quarter of 2016, the Firm implemented interagency guidance on the definition of leveraged financing, which broadened the scope of sectors beyond that of Commercial & Industrial and transactions beyond those of buyouts, acquisitions or capital distributions, and modified the methodology for calculating leveraged ratios. As of September 30, 2016, included in other unfunded commitments to extend credit, are noninvestment-grade exposures to leveraged finance counterparties, which totaled \$60.6 billion.

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 September 30, 2016, and December 31, 2015, the secured clearance advance facility maximum outstanding commitment amount was \$2.4 billion and \$2.9 billion, respectively.

Standby letters of credit and other financial guarantees

Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions.

The following table summarizes the standby letters of credit and other letters of credit arrangements as of September 30, 2016, and December 31, 2015.

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

| (in millions) | September 30, 2016 | | December 31, 2015 | |
|---|--|-------------------------|--|-------------------------|
| | 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) | \$ 28,388 | \$ 2,497 | \$ 31,751 | \$ 3,290 |
| Noninvestment-grade ^(a) | 7,859 | 650 | 7,382 | 651 |
| Total contractual amount | \$ 36,247 | \$ 3,147 | \$ 39,133 | \$ 3,941 |
| Allowance for lending-related commitments | \$ 147 | \$ 1 | \$ 121 | \$ 2 |
| Guarantee liability | 426 | — | 427 | — |
| Total carrying value | \$ 573 | \$ 1 | \$ 548 | \$ 2 |
| Commitments with collateral | \$ 20,359 | \$ 580 | \$ 18,825 | \$ 996 |

(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

In addition to the contracts described above, 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 2015 Annual Report. The total notional value of the derivatives that the Firm deems to be guarantees was \$53.9 billion and \$53.8 billion at September 30, 2016, and December 31, 2015, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was \$28.6 billion and \$28.4 billion at September 30, 2016, and December 31, 2015, respectively, and the maximum exposure to loss was \$3.0 billion and \$3.0 billion at September 30, 2016, and December 31, 2015. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value related to derivatives that the Firm deems to be guarantees were derivative payables of \$237 million and \$236 million at September 30, 2016, and December 31, 2015, respectively, and derivative receivables of \$7 million and \$14 million at September 30, 2016, and December 31, 2015, respectively. 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 5.

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 that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser. Further, although the Firm's securitizations are predominantly nonrecourse, the Firm does provide recourse servicing in certain limited cases where it agrees to share credit risk with the owner of the mortgage loans. For additional information, see Note 29 of JPMorgan Chase's 2015 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 23 of this Form 10-Q and Note 31 of JPMorgan Chase's 2015 Annual Report.

Guarantees of subsidiary

JPMorgan Chase Financial Company LLC ("JPMFC"), a direct, 100%-owned finance subsidiary of the Parent Company, was formed on September 30, 2015, for the purpose of issuing debt and other securities in offerings to investors. 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 22 – Pledged assets and collateral

For a discussion of the Firm's pledged assets and collateral, see Note 30 of JPMorgan Chase's 2015 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, and to collateralize repurchase and other securities financing agreements, and to 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. At September 30, 2016, and December 31, 2015, the Firm had pledged assets of \$425.6 billion and \$385.6 billion, respectively, at Federal Reserve banks and FHLBs. In addition, as of September 30, 2016, and December 31, 2015, the Firm had pledged \$54.8 billion and \$50.7 billion, respectively, of financial assets that may not be sold or repledged or otherwise used by the secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 15 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities, see Note 12. For additional information on the Firm's long-term debt, see Note 21 of JPMorgan Chase's 2015 Annual Report.

Collateral

At September 30, 2016, and December 31, 2015, the Firm had accepted financial assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of \$893.8 billion and \$748.5 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, \$710.5 billion and \$580.9 billion, respectively, were sold, repledged, delivered or otherwise used. Collateral was generally used under repurchase agreements, securities lending agreements or to cover customer short sales and to collateralize deposits and derivative agreements.

Note 23 – Litigation

Contingencies

As of September 30, 2016, 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 \$3.1 billion at September 30, 2016. 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, particularly proceedings that could result from government investigations. Accordingly, the Firm's estimate will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

Auto Dealer Regulatory Matter. The U.S. Department of Justice ("DOJ") is investigating potential statistical disparities in markups charged to borrowers of different races and ethnicities by automobile dealers on loans originated by those dealers and purchased by the Firm.

CIO Litigation. The Firm has been sued in a consolidated shareholder class action, and in a consolidated putative class action brought under the Employee Retirement Income Security Act ("ERISA"), relating to 2012 losses in the synthetic credit portfolio formerly managed by the Firm's Chief Investment Office ("CIO"). A settlement of the shareholder class action, under which the Firm will pay \$150 million, has received final court approval over objections from two individuals. One of the objectors is seeking to appeal the approval of the settlement.

The putative ERISA class action has been dismissed, and that dismissal has been affirmed by the appellate court, but the plaintiffs have filed a motion for rehearing.

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. The sentencing in connection with the Firm’s agreement in May 2015 to plead guilty to a single violation of federal antitrust law has been scheduled for December 15, 2016. The Firm has an application pending with the Department of Labor to secure a necessary waiver in advance of sentencing.

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 seeks to represent only those persons in Quebec who engaged in FX transactions.

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 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. The case has been remanded to the District Court for further proceedings consistent with the appellate decision.

Certain merchants and trade associations have also filed a motion with the District Court seeking to set aside the approval of the class settlement on the basis of alleged improper communications between one of MasterCard’s former outside counsel and one of plaintiffs’ outside counsel. That motion remains pending. Certain merchants that opted out of the class settlement have filed actions against Visa and MasterCard, as well as against the Firm and other banks, and those actions are proceeding.

Investment Management Litigation. The Firm is defending two pending cases that are coordinated for pre-trial and trial purposes, alleging that investment portfolios managed by J.P. Morgan Investment Management (“JPMIM”) were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for total losses of more than \$1 billion in market value of these securities. Discovery has been completed. In January 2016, plaintiffs filed a joint partial motion for summary judgment

in the coordinated actions, which JPMIM has opposed. The trial is scheduled to begin in March 2017.

Lehman Brothers Bankruptcy Proceedings. In January 2016, JPMorgan Chase Bank, N.A. and Lehman Brothers Holdings Inc. (“LBHI”) and several of LBHI’s subsidiaries reached an agreement, approved by the Bankruptcy Court, under which the Firm paid \$1.42 billion to settle a variety of claims asserted by LBHI and those subsidiaries in multiple separate litigations and claims objections. In those actions, LBHI had alleged, among other things, that it was entitled to recover \$7.9 billion that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI’s bankruptcy, that JPMorgan Chase Bank, N.A.’s collateral requests hastened LBHI’s bankruptcy, and that LBHI was entitled to damages resulting from the Firm filing allegedly overstated claims relating to the close-out of derivatives positions following the Lehman bankruptcy.

The January 2016 settlement did not resolve the following remaining matters: In the Bankruptcy Court proceedings, LBHI and its Official Committee of Unsecured Creditors filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to clearing advances made to Lehman Brothers Inc., principally on the grounds that the Firm had not conducted the sale of the securities collateral held for its claims in a commercially reasonable manner. LBHI also brought two claims objections relating to securities lending claims and a group of other smaller claims. Discovery with respect to these objections is ongoing.

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 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 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 May 2014, the EC issued a Statement of Objections outlining its case against the Firm

(and others) as to EURIBOR, to which the Firm has filed a response and made oral representations. 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 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.

In the U.S. dollar LIBOR-related actions, the 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. JPMorgan Chase and other defendants again moved to dismiss the antitrust claims in July 2016.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodity Exchange Act. In April 2016, the Firm settled the ISDAFIX litigation, along with certain other banks. Those settlements have been preliminarily approved by the Court.

Madoff Litigation. A putative class action was filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff’s Ponzi scheme and were not included in a prior class action settlement. These plaintiffs allege violations of the federal securities law, as well as other state and federal claims. A similar action was filed in the United States District Court for the Middle 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. The New Jersey court granted a transfer motion to the United States District Court for the Southern District of New York, which granted the Firm's motion to dismiss, and the plaintiffs have filed an appeal of that dismissal.

Three shareholder derivative actions have also been filed in New York federal and state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty in connection with the Firm's relationship with Bernard Madoff and the alleged failure to maintain effective internal controls to detect fraudulent transactions. All three actions have been dismissed.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. The Firm and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). Following the settlements referred to below, the remaining civil cases include one investor action, one action by a 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 shareholder derivative actions relating to the Firm's MBS activities, and one action remains pending.

Issuer Litigation - Individual Purchaser Actions. With the exception of one remaining action, the Firm has settled 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 Actions. 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. The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the Fair Housing Act and Equal Credit Opportunity Act in connection with its mortgage lending practices. 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. The municipal actions are stayed pending an appeal by the City of Los Angeles to the United States Court of Appeals for the Ninth Circuit, as well as the United States Supreme Court's review of decisions of the United States Court of Appeals for the Eleventh Circuit which held, among other things, that the City of Miami has

standing under the Fair Housing Act to pursue similar claims against other banks.

In March 2015, JPMorgan Chase Bank, N.A. entered into a settlement agreement with the Executive Office for United States Bankruptcy Trustees and the United States Trustee Program (collectively, the “Bankruptcy Trustee”) to resolve issues relating to mortgage payment change notices and escrow statements in bankruptcy proceedings. The Bankruptcy Trustee continues to review certain issues relating to mortgage payment change notices. In January 2016, the OCC determined that, among other things, the mortgage payment change notices issues that were the subject of the settlement with the Bankruptcy Trustee violated the 2011 mortgage servicing-related consent order entered into by JPMorgan Chase Bank, N.A. and the OCC (as amended in 2013 and 2015), and assessed a \$48 million civil money penalty. The OCC concurrently terminated that consent order.

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. The actions collectively seek recovery of approximately \$450 million. The Court has granted the defendants’ motion to dismiss the complaints in the actions filed by the Petters bankruptcy trustees, but has allowed the plaintiffs to file an amended complaint.

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 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. Plaintiffs’ appeal of the dismissal is pending.

Referral Hiring Practices Investigations. Various regulators, including the DOJ’s Criminal Division as well as the SEC, are investigating, among other things, the Firm’s compliance with the Foreign Corrupt Practices Act and other laws with respect to the Firm’s hiring practices related to candidates referred by clients, potential clients and government officials in the Asia Pacific region, as well as to controls applicable to those activities. The Firm continues to cooperate with these investigations and is currently engaged in discussions with various regulators about resolving their respective investigations. There is no assurance that such discussions will result in settlements.

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. In April 2015, JPMorgan Chase Bank, N.A. was notified that the authorities were formally investigating the role of its Paris branch in the transactions, including alleged criminal tax abuse. JPMorgan Chase is responding to and cooperating with the investigation, and has raised legal challenges which are currently pending before the Court of Cassation in France. 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 in all such matters. 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 a benefit of \$(71) million and an expense of \$1.3 billion during the three months ended September 30, 2016 and 2015, respectively, and a benefit of \$(547) million and an expense of \$2.3 billion during the nine months ended September 30, 2016 and 2015, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact 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 24 – 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 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 Business Segment Results on page 18, and pages 83-84, and Note 33 of JPMorgan Chase's 2015 Annual Report.

Segment results

The accompanying tables provide a summary of the Firm's segment results for the three and nine months ended September 30, 2016 and 2015, on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented 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).

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. The line of business equity allocations are updated as refinements are implemented. Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In rules) and economic risk. The amount of capital assigned to each business is referred to as equity.

Segment results and reconciliation^(a)

| As of or for the three months ended September 30, (in millions, except ratios) | Consumer & Community Banking | | Corporate & Investment Bank | | Commercial Banking | | Asset Management | |
|--|------------------------------|-----------------|-----------------------------|-----------------|--------------------|---------------|------------------|---------------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Noninterest revenue | \$ 3,868 | \$ 3,729 | \$ 6,690 | \$ 5,748 | \$ 578 | \$ 522 | \$ 2,277 | \$ 2,261 |
| Net interest income | 7,460 | 7,150 | 2,765 | 2,420 | 1,292 | 1,122 | 770 | 633 |
| Total net revenue | 11,328 | 10,879 | 9,455 | 8,168 | 1,870 | 1,644 | 3,047 | 2,894 |
| Provision for credit losses | 1,294 | 389 | 67 | 232 | (121) | 82 | 32 | (17) |
| Noninterest expense | 6,510 | 6,237 | 4,934 | 6,131 | 746 | 719 | 2,130 | 2,109 |
| Income before income tax expense | 3,524 | 4,253 | 4,454 | 1,805 | 1,245 | 843 | 885 | 802 |
| Income tax expense | 1,320 | 1,623 | 1,542 | 341 | 467 | 325 | 328 | 327 |
| Net income | \$ 2,204 | \$ 2,630 | \$ 2,912 | \$ 1,464 | \$ 778 | \$ 518 | \$ 557 | \$ 475 |
| Average common equity | \$ 51,000 | \$ 51,000 | \$ 64,000 | \$ 62,000 | \$ 16,000 | \$ 14,000 | \$ 9,000 | \$ 9,000 |
| Total assets | 521,276 | 484,253 | 825,933 | 801,133 | 212,189 | 201,157 | 137,295 | 131,412 |
| Return on common equity | 16% | 20% | 17% | 8% | 18% | 14% | 24% | 20% |
| Overhead ratio | 57 | 57 | 52 | 75 | 40 | 44 | 70 | 73 |

| As of or for the three months ended September 30, (in millions, except ratios) | Corporate | | Reconciling Items ^(a) | | Total | |
|--|-----------------|-----------------|----------------------------------|--------------|-----------------|-----------------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Noninterest revenue | \$ 197 | \$ 73 | \$ (540) | \$ (477) | \$ 13,070 | \$ 11,856 |
| Net interest income | (385) | (123) | (299) | (278) | 11,603 | 10,924 |
| Total net revenue | (188) | (50) | (839) | (755) | 24,673 | 22,780 |
| Provision for credit losses | (1) | (4) | – | – | 1,271 | 682 |
| Noninterest expense | 143 | 172 | – | – | 14,463 | 15,368 |
| Income/(loss) before income tax expense/(benefit) | (330) | (218) | (839) | (755) | 8,939 | 6,730 |
| Income tax expense/(benefit) | (165) | (1,935) | (839) | (755) | 2,653 | (74) |
| Net income/(loss) | \$ (165) | \$ 1,717 | \$ – | \$ – | \$ 6,286 | \$ 6,804 |
| Average common equity | \$ 86,089 | \$ 81,023 | \$ – | \$ – | \$ 226,089 | \$ 217,023 |
| Total assets | 824,336 | 798,680 | NA | NA | 2,521,029 | 2,416,635 |
| Return on common equity | NM | NM | NM | NM | 10% | 12% |
| Overhead ratio | NM | NM | NM | NM | 59 | 67 |

Segment results and reconciliation^(a)

| As of or for the nine months ended September 30, (in millions, except ratios) | Consumer & Community Banking | | Corporate & Investment Bank | | Commercial Banking | | Asset Management | |
|--|------------------------------|-----------------|-----------------------------|-----------------|--------------------|-----------------|------------------|-----------------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Noninterest revenue | \$ 11,812 | \$ 11,554 | \$ 18,699 | \$ 19,055 | \$ 1,720 | \$ 1,767 | \$ 6,714 | \$ 7,189 |
| Net interest income | 22,084 | 21,044 | 8,056 | 7,418 | 3,770 | 3,358 | 2,244 | 1,885 |
| Total net revenue | 33,896 | 32,598 | 26,755 | 26,473 | 5,490 | 5,125 | 8,958 | 9,074 |
| Provision for credit losses | 3,545 | 2,021 | 761 | 251 | 158 | 325 | 37 | (13) |
| Noninterest expense | 18,602 | 18,637 | 14,820 | 16,925 | 2,190 | 2,131 | 6,303 | 6,690 |
| Income before income tax expense | 11,749 | 11,940 | 11,174 | 9,297 | 3,142 | 2,669 | 2,618 | 2,397 |
| Income tax expense | 4,399 | 4,558 | 3,790 | 2,955 | 1,172 | 1,028 | 953 | 969 |
| Net income | \$ 7,350 | \$ 7,382 | \$ 7,384 | \$ 6,342 | \$ 1,970 | \$ 1,641 | \$ 1,665 | \$ 1,428 |
| Average common equity | \$ 51,000 | \$ 51,000 | \$ 64,000 | \$ 62,000 | \$ 16,000 | \$ 14,000 | \$ 9,000 | \$ 9,000 |
| Total assets | 521,276 | 484,253 | 825,933 | 801,133 | 212,189 | 201,157 | 137,295 | 131,412 |
| Return on common equity | 18% | 18% | 14% | 13% | 15% | 15% | 24% | 20% |
| Overhead ratio | 55 | 57 | 55 | 64 | 40 | 42 | 70 | 74 |

| As of or for the nine months ended September 30, (in millions, except ratios) | Corporate | | Reconciling Items ^(a) | | Total | |
|--|-----------------|-----------------|----------------------------------|----------------|------------------|------------------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| Noninterest revenue | \$ 637 | \$ 213 | \$ (1,620) | \$ (1,405) | \$ 37,962 | \$ 38,373 |
| Net interest income | (927) | (597) | (897) | (823) | 34,330 | 32,285 |
| Total net revenue | (290) | (384) | (2,517) | (2,228) | 72,292 | 70,658 |
| Provision for credit losses | (4) | (8) | — | — | 4,497 | 2,576 |
| Noninterest expense | 23 | 368 | — | — | 41,938 | 44,751 |
| Income/(loss) before income tax expense/(benefit) | (309) | (744) | (2,517) | (2,228) | 25,857 | 23,331 |
| Income tax expense/(benefit) | 54 | (2,959) | (2,517) | (2,228) | 7,851 | 4,323 |
| Net income/(loss) | \$ (363) | \$ 2,215 | \$ — | \$ — | \$ 18,006 | \$ 19,008 |
| Average common equity | \$ 84,034 | \$ 78,389 | \$ — | \$ — | \$ 224,034 | \$ 214,389 |
| Total assets | 824,336 | 798,680 | NA | NA | 2,521,029 | 2,416,635 |
| Return on common equity | NM | NM | NM | NM | 10% | 11% |
| Overhead ratio | NM | NM | NM | NM | 58 | 63 |

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



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 September 30, 2016, and the related consolidated statements of income and comprehensive income for each of the three-month and nine-month periods ended September 30, 2016 and 2015 and changes in stockholders' equity, and cash flows for each of the nine-month periods ended September 30, 2016 and 2015. 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, 2015, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and changes in cash flows for the year then ended (not presented herein), and in our report dated February 23, 2016, 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, 2015, is fairly stated in all material respects in relation to the consolidated balance sheet from which it has been derived.

A handwritten signature in black ink that reads "PricewaterhouseCoopers LLP".

November 1, 2016

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

| | Three months ended September 30, 2016 | | | Three months ended September 30, 2015 | | |
|---|---------------------------------------|-------------------------|---------------------|---------------------------------------|-------------------------|---------------------|
| | Average balance | Interest ^(e) | Rate (annualized) | Average balance | Interest ^(e) | Rate (annualized) |
| Assets | | | | | | |
| Deposits with banks | \$ 409,176 | \$ 448 | 0.44 % | \$ 413,038 | \$ 291 | 0.28 % |
| Federal funds sold and securities purchased under resale agreements | 196,657 | 566 | 1.14 | 201,673 | 431 | 0.85 |
| Securities borrowed | 102,790 | (91) ^(f) | (0.35) | 98,193 | (118) ^(f) | (0.48) |
| Trading assets - debt instruments | 219,816 | 1,911 | 3.46 | 202,388 | 1,553 | 3.04 |
| Taxable securities | 228,719 | 1,365 | 2.37 | 264,407 | 1,553 | 2.33 |
| Nontaxable securities ^(a) | 44,274 | 657 | 5.91 | 42,957 | 655 | 6.05 |
| Total securities | 272,993 | 2,022 | 2.95 ^(g) | 307,364 | 2,208 | 2.85 ^(g) |
| Loans | 874,396 | 9,294 | 4.23 | 793,584 | 8,480 | 4.24 |
| Other assets ^(b) | 40,665 | 219 | 2.14 | 40,650 | 172 | 1.67 |
| Total interest-earning assets | 2,116,493 | 14,369 | 2.70 | 2,056,890 | 13,017 | 2.51 |
| Allowance for loan losses | (14,046) | | | (13,942) | | |
| Cash and due from banks | 18,614 | | | 21,753 | | |
| Trading assets - equity instruments | 98,714 | | | 96,868 | | |
| Trading assets - derivative receivables | 72,520 | | | 69,646 | | |
| Goodwill | 47,302 | | | 47,428 | | |
| Mortgage servicing rights | 4,991 | | | 7,213 | | |
| Other intangible assets | 903 | | | 1,064 | | |
| Other assets | 131,471 | | | 134,296 | | |
| Total assets | \$ 2,476,962 | | | \$ 2,421,216 | | |
| Liabilities | | | | | | |
| Interest-bearing deposits | \$ 929,122 | \$ 340 | 0.15 % | \$ 852,219 | \$ 293 | 0.14 % |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 180,098 | 286 | 0.63 | 188,006 | 159 | 0.34 |
| Commercial paper | 13,798 | 34 | 0.97 | 26,167 | 24 | 0.35 |
| Trading liabilities - debt, short-term and other liabilities ^{(c)(d)} | 196,247 | 285 | 0.58 | 198,876 | 132 | 0.26 |
| Beneficial interests issued by consolidated VIEs | 42,462 | 135 | 1.26 | 49,808 | 115 | 0.92 |
| Long-term debt | 300,295 | 1,387 | 1.84 | 288,413 | 1,092 | 1.50 |
| Total interest-bearing liabilities | 1,662,022 | 2,467 | 0.59 | 1,603,489 | 1,815 | 0.45 |
| Noninterest-bearing deposits | 408,853 | | | 418,742 | | |
| Trading liabilities - equity instruments ^(d) | 22,262 | | | 17,595 | | |
| Trading liabilities - derivative payables | 54,552 | | | 61,754 | | |
| All other liabilities, including the allowance for lending-related commitments | 77,116 | | | 76,895 | | |
| Total liabilities | 2,224,805 | | | 2,178,475 | | |
| Stockholders' equity | | | | | | |
| Preferred stock | 26,068 | | | 25,718 | | |
| Common stockholders' equity | 226,089 | | | 217,023 | | |
| Total stockholders' equity | 252,157 | | | 242,741 | | |
| Total liabilities and stockholders' equity | \$ 2,476,962 | | | \$ 2,421,216 | | |
| Interest rate spread | | | 2.11 % | | | 2.06 % |
| Net interest income and net yield on interest-earning assets | | \$ 11,902 | 2.24 | | \$ 11,202 | 2.16 |

(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 \$94,731 million and \$78,439 million for the three months ended September 30, 2016 and 2015, 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 September 30, 2016 and 2015, the annualized rates for securities, based on amortized cost, were 3.02% and 2.90%, respectively; this does not give effect to changes in fair value that are reflected in AOCI.

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

| | Nine months ended September 30, 2016 | | | Nine months ended September 30, 2015 | | |
|---|--------------------------------------|-------------------------|---------------------|--------------------------------------|-------------------------|---------------------|
| | Average balance | Interest ^(e) | Rate (annualized) | Average balance | Interest ^(e) | Rate (annualized) |
| Assets | | | | | | |
| Deposits with banks | \$ 384,217 | \$ 1,374 | 0.48 % | \$ 443,420 | \$ 944 | 0.28 % |
| Federal funds sold and securities purchased under resale agreements | 201,157 | 1,696 | 1.13 | 208,132 | 1,167 | 0.75 |
| Securities borrowed | 102,640 | (279) ^(f) | (0.36) | 105,475 | (397) ^(f) | (0.50) |
| Trading assets - debt instruments | 214,656 | 5,505 | 3.43 | 207,065 | 5,063 | 3.27 |
| Taxable securities | 234,889 | 4,187 | 2.38 | 280,506 | 4,885 | 2.33 |
| Nontaxable securities ^(a) | 44,263 | 1,993 | 6.01 | 41,484 | 1,887 | 6.08 |
| Total securities | 279,152 | 6,180 | 2.96 ^(g) | 321,990 | 6,772 | 2.81 ^(g) |
| Loans | 858,275 | 27,233 | 4.24 | 775,274 | 24,600 | 4.24 |
| Other assets ^(b) | 40,036 | 623 | 2.08 | 39,417 | 492 | 1.67 |
| Total interest-earning assets | 2,080,133 | 42,332 | 2.72 | 2,100,773 | 38,641 | 2.46 |
| Allowance for loan losses | (13,889) | | | (14,025) | | |
| Cash and due from banks | 18,505 | | | 23,219 | | |
| Trading assets - equity instruments | 94,555 | | | 108,819 | | |
| Trading assets - derivative receivables | 71,004 | | | 75,732 | | |
| Goodwill | 47,314 | | | 47,468 | | |
| Mortgage servicing rights | 5,472 | | | 6,989 | | |
| Other intangible assets | 938 | | | 1,112 | | |
| Other assets | 133,802 | | | 139,932 | | |
| Total assets | \$ 2,437,834 | | | \$ 2,490,019 | | |
| Liabilities | | | | | | |
| Interest-bearing deposits | \$ 909,571 | \$ 981 | 0.14 % | \$ 875,164 | \$ 965 | 0.15 % |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 176,081 | 828 | 0.63 | 196,054 | 444 | 0.30 |
| Commercial paper | 16,257 | 105 | 0.86 | 44,943 | 88 | 0.26 |
| Trading liabilities - debt, short-term and other liabilities ^{(c)(d)} | 197,537 | 826 | 0.56 | 211,739 | 459 | 0.29 |
| Beneficial interests issued by consolidated VIEs | 40,245 | 366 | 1.22 | 50,692 | 323 | 0.85 |
| Long-term debt | 293,418 | 3,999 | 1.82 | 283,207 | 3,254 | 1.54 |
| Total interest-bearing liabilities | 1,633,109 | 7,105 | 0.58 | 1,661,799 | 5,533 | 0.45 |
| Noninterest-bearing deposits | 402,925 | | | 426,802 | | |
| Trading liabilities - equity instruments ^(d) | 20,511 | | | 17,442 | | |
| Trading liabilities - derivative payables | 56,390 | | | 67,298 | | |
| All other liabilities, including the allowance for lending-related commitments | 74,797 | | | 78,932 | | |
| Total liabilities | 2,187,732 | | | 2,252,273 | | |
| Stockholders' equity | | | | | | |
| Preferred stock | 26,068 | | | 23,357 | | |
| Common stockholders' equity | 224,034 | | | 214,389 | | |
| Total stockholders' equity | 250,102 | | | 237,746 | | |
| Total liabilities and stockholders' equity | \$ 2,437,834 | | | \$ 2,490,019 | | |
| Interest rate spread | | | 2.14 % | | | 2.01 % |
| Net interest income and net yield on interest-earning assets | | \$ 35,227 | 2.26 | | \$ 33,108 | 2.11 |

(a) Represents securities which are tax exempt for U.S. federal income tax purposes.

(b) Includes margin loans.

(c) Includes brokerage customer payables.

(d) Included trading liabilities - debt and equity instruments of \$92,542 million and \$81,913 million for the nine months ended September 30, 2016 and 2015, 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 nine months ended September 30, 2016 and 2015, the annualized rates for securities, based on amortized cost, were 3.02% and 2.87% respectively; this does not give effect to changes in fair value that are reflected in AOCI.

GLOSSARY OF TERMS AND ACRONYMS

2015 Annual Report or 2015 Form 10-K: Annual report on Form 10-K for year ended December 31, 2015, 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.

AM: Asset Management

AOI: Accumulated other comprehensive income/(loss)

ARM: Adjustable rate mortgage(s)

AUC: Assets under custody

AUM: Assets under 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

CET1 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. During the third quarter 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program.

CLO: Collateralized loan obligations

CLTV: Combined loan-to-value

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: 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 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

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.

FASB: Financial Accounting Standards Board

Fannie Mae: Federal National Mortgage Association

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.

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

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.

ISDA: International Swaps and Derivatives Association

JPMorgan Chase: JPMorgan Chase & Co.

JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Clearing: J.P. Morgan Clearing Corp.

JPMorgan Securities: J.P. Morgan Securities LLC

LCR: Liquidity coverage ratio

LGD: Loss given default

LLC: Limited Liability Company

LOB: Line of business

LIBOR: London Interbank Offered Rate

LTD: Life-to-date

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 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.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

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 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 management believes 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 satisfaction, predominantly real estate owned and other commercial and personal property.

NOW: Negotiable Order of Withdrawal

NSFR: Net stable funding ratio

OAS: Option-adjusted spread

OCC: Office of the Comptroller of the Currency

OCI: Other comprehensive income/(loss)

OEP: One Equity Partners

OIS: Overnight index swap

OPEB: Other postretirement employee benefit

OTC: Over-the-counter derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

OTC cleared: Over-the-counter cleared derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

OTTI: Other-than-temporary impairment

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase & Co.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, “dividends”), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

PCA: Prompt corrective action

PCI: “Purchased credit-impaired” loans represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the FASB. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics

(e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

PD: Probability of default

PRA: Prudential Regulatory Authority

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Principal transactions revenue: Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market-making and client-driven activities. In addition, 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 specified 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 prime and retail brokerage customers which are included in accrued interest and accounts receivable on the 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).

RHS: Rural Housing Service of the U.S. Department of Agriculture

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.

ROE: Return on equity

ROTCE: Return on tangible common equity

RSU(s): Restricted stock units

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: A 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. GSEs and U.S. GSE obligations: 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. LCR: Liquidity coverage ratio under the final U.S. rule.

U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of 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.

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 Credit Card and Commerce Solutions businesses.

Commerce Solutions is a business that primarily processes transactions for merchants.

Credit card sales volume – Dollar amount of cardmember purchases, net of returns.

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 MANAGEMENT (“AM”)

Assets under management – Represent assets managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes “Committed capital not Called,” on which AM earns fees.

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.

AM’s lines of business consist of the following:

Global Investment Management provides comprehensive global investment services - including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Global 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.

AM’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.

J.P. Morgan 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 60-65 of this Form 10-Q and pages 133-139 of JPMorgan Chase's 2015 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 174 of JPMorgan Chase's 2015 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 September 30, 2016, 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 the Firm's 2015 Annual Report on Form 10-K, see the discussion of the Firm's material legal proceedings in Note 23 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 8-18 of JPMorgan Chase's 2015 Annual Report on Form 10-K and Forward-Looking Statements on page 84 of this Form 10-Q.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

During the three months ended September 30, 2016, there were no shares of common stock of JPMorgan Chase & Co. issued in transactions exempt from registration under the Securities Act of 1933, pursuant to Section 4(2) thereof.

Repurchases under the common equity repurchase program

On March 17, 2016, the Firm announced that its Board of Directors had authorized the repurchase of up to an additional \$1.9 billion of common equity (common stock and warrants) through June 30, 2016 under its equity repurchase program. This amount is in addition to the \$6.4 billion of common equity that was previously authorized for repurchase between April 1, 2015 and June 30, 2016.

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 and nine months ended September 30, 2016 and 2015. There were no warrants repurchased during the nine months ended September 30, 2016 and 2015.

| (in millions) | Three months ended September 30, | | Nine months ended September 30, | |
|--|-------------------------------------|----------|------------------------------------|----------|
| | 2016 | 2015 | 2016 | 2015 |
| Total shares of common stock repurchased | 35.6 | 19.1 | 110.6 | 70.8 |
| Aggregate common stock repurchases | \$ 2,295 | \$ 1,248 | \$ 6,831 | \$ 4,397 |

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 nine months ended September 30, 2016, were as follows.

| Nine months ended September 30, 2016 | 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) |
|--------------------------------------|--|---|---|--|
| First quarter | 29,153,888 | \$ 58.17 | \$ 1,696 | \$ 2,898 |
| Second quarter | 45,855,464 | 61.93 | 2,840 | 58 ^(b) |
| July | 13,334,777 | 61.74 | 823 | 9,777 |
| August | 10,984,034 | 65.31 | 718 | 9,059 |
| September | 11,288,053 | 66.83 | 754 | 8,305 |
| Third quarter | 35,606,864 | 64.46 | 2,295 | 8,305 |
| Year-to-date | 110,616,216 | \$ 61.75 | \$ 6,831 | \$ 8,305 ^(c) |

(a) Excludes commissions cost.

(b) The \$58 million unused portion under the prior Board authorization was canceled when the \$10.6 billion program was authorized.

(c) Dollar value 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.

None.

Item 6. Exhibits.

| Exhibit No. | Description of Exhibit |
|-------------|---|
| 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 September 30, 2016, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income (unaudited) for the three and nine months ended September 30, 2016 and 2015, (ii) the Consolidated statements of comprehensive income (unaudited) for the three and nine months ended September 30, 2016 and 2015, (iii) the Consolidated balance sheets (unaudited) as of September 30, 2016, and December 31, 2015, (iv) the Consolidated statements of changes in stockholders' equity (unaudited) for the nine months ended September 30, 2016 and 2015, (v) the Consolidated statements of cash flows (unaudited) for the nine months ended September 30, 2016 and 2015, 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/ Mark W. O'Donovan

Mark W. O'Donovan

Managing Director and Corporate Controller
(Principal Accounting Officer)

Date: November 1, 2016

INDEX TO EXHIBITS

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| 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. |



November 1, 2016

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 November 1, 2016 on our review of the consolidated balance sheet of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of September 30, 2016 and the related consolidated statements of income, comprehensive income for each of the three-month and nine-month periods ended September 30, 2016 and 2015 and changes in stockholders' equity and cash flows for each of the nine-month periods ended September 30, 2016 and 2015, included in the Firm's quarterly report on Form 10-Q for the quarter ended September 30, 2016 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,

A handwritten signature in black ink that reads "PricewaterhouseCoopers LLP". The signature is written in a cursive, flowing style.

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: November 1, 2016

/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: November 1, 2016

/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 September 30, 2016 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: November 1, 2016

By: /s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Date: November 1, 2016

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.