

BANK OF AMERICA CORP /DE/  
Form 10-Q  
November 01, 2016

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549  
FORM 10-Q  
(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934

For the Quarterly Period Ended September 30, 2016  
or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934

For the transition period from            to  
Commission file number:

1-6523

Exact name of registrant as specified in its charter:

Bank of America Corporation

State or other jurisdiction of incorporation or organization:

Delaware

IRS Employer Identification No.:

56-0906609

Address of principal executive offices:

Bank of America Corporate Center

100 N. Tryon Street

Charlotte, North Carolina 28255

Registrant's telephone number, including area code:

(704) 386-5681

Former name, former address and former fiscal year, if changed since last report:

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 (check one).

Non-accelerated filer

Large accelerated filer  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 Exchange Act Rule 12b-2).

Yes  No

On October 31, 2016, there were 10,105,046,654 shares of Bank of America Corporation Common Stock outstanding.

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Bank of America Corporation  
 September 30, 2016  
 Form 10-Q

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Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This report on Form 10-Q, the documents that it incorporates by reference and the documents into which it may be incorporated by reference may contain, and from time to time Bank of America Corporation (collectively with certain of its subsidiaries and affiliates, the Corporation) and its management may make certain statements that constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. 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 "anticipates," "targets," "expects," "hopes," "estimates," "intends," "plans," "goals," "believes," "continue" and other similar expressions or future or conditional verbs such as "will," "may," "might," "should," "would" and "could." Forward-looking statements represent the Corporation's current expectations, plans or forecasts of its future results, revenues, expenses, efficiency ratio, capital measures, and future business and economic conditions more generally, and other future matters. These statements are not guarantees of future results or performance and involve certain known and unknown risks, uncertainties and assumptions that are difficult to predict and are often beyond the Corporation's control. Actual outcomes and results may differ materially from those expressed in, or implied by, any of these forward-looking statements.

You should not place undue reliance on any forward-looking statement and should consider the following uncertainties and risks, as well as the risks and uncertainties more fully discussed elsewhere in this report, including under Item 1A. Risk Factors of the Corporation's 2015 Annual Report on Form 10-K and in any of the Corporation's subsequent Securities and Exchange Commission filings: the Corporation's ability to resolve representations and warranties repurchase and related claims, including claims brought by investors or trustees seeking to distinguish certain aspects of the New York Court of Appeals' ACE Securities Corp v. DB Structured Products, Inc. (ACE) decision or to assert other claims seeking to avoid the impact of the ACE decision; the possibility that the Corporation could face increased servicing, securities, fraud, indemnity, contribution or other claims from one or more counterparties, including trustees, purchasers of loans, underwriters, issuers, other parties involved in securitizations, monolines or private-label and other investors; the possibility that future representations and warranties losses may occur in excess of the Corporation's recorded liability and estimated range of possible loss for its representations and warranties exposures; potential claims, damages, penalties, fines and reputational damage resulting from pending or future litigation and regulatory proceedings, including the possibility that amounts may be in excess of the Corporation's recorded liability and estimated range of possible loss for litigation exposures; the possible outcome of LIBOR, other reference rate, financial instrument and foreign exchange inquiries, investigations and litigation; uncertainties about the financial stability and growth rates of non-U.S. jurisdictions, the risk that those jurisdictions may face difficulties servicing their sovereign debt, and related stresses on financial markets, currencies and trade, and the Corporation's exposures to such risks, including direct, indirect and operational; the impact of U.S. and global interest rates (including negative or continued low interest rates), currency exchange rates and economic conditions; the possibility that future credit losses may be higher than currently expected due to changes in economic assumptions, customer behavior and other uncertainties; the impact on the Corporation's business, financial condition and results of operations of a potential higher interest rate environment; the impact on the Corporation's business, financial condition and results of operations from a protracted period of lower oil prices or ongoing volatility with respect to oil prices; our ability to achieve our expense targets; adverse changes to the Corporation's credit ratings from the major credit rating agencies; estimates of the fair value of certain of the Corporation's assets and liabilities; uncertainty regarding the content, timing and impact of regulatory capital and liquidity requirements, including the potential adoption of total loss-absorbing capacity requirements; the potential for payment protection insurance exposure to increase as a result of Financial Conduct Authority actions; the impact of Federal Reserve actions on the Corporation's capital plans; the possible impact of the Corporation's failure to remediate deficiencies and shortcomings identified by banking regulators in the Corporation's Recovery and Resolution plans; the impact of implementation and compliance with U.S. and international laws, regulations and regulatory interpretations, including, but not limited to, recovery and resolution planning requirements, FDIC assessments, the Volcker Rule, fiduciary

standards and derivatives regulations; a failure in or breach of the Corporation's operational or security systems or infrastructure, or those of third parties, including as a result of cyber attacks; the impact on the Corporation's business, financial condition and results of operations from the potential exit of the United Kingdom from the European Union; and other similar matters.

Forward-looking statements speak only as of the date they are made, and the Corporation undertakes no obligation to update any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made.

Notes to the Consolidated Financial Statements referred to in the Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) are incorporated by reference into the MD&A. Certain prior-period amounts have been reclassified to conform to current period presentation. Throughout the MD&A, the Corporation uses certain acronyms and abbreviations which are defined in the Glossary.

The Corporation's Annual Report on Form 10-K for the year ended December 31, 2015 as supplemented by a Current Report on Form 8-K filed on August 1, 2016 to reflect reclassified business segment information is referred to herein as the 2015 Annual Report on Form 10-K.

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### Executive Summary

### Business Overview

The Corporation is a Delaware corporation, a bank holding company (BHC) and a financial holding company. When used in this report, "the Corporation" may refer to Bank of America Corporation individually, Bank of America Corporation and its subsidiaries, or certain of Bank of America Corporation's subsidiaries or affiliates. Our principal executive offices are located in Charlotte, North Carolina. Through our banking and various nonbank subsidiaries throughout the U.S. and in international markets, we provide a diversified range of banking and nonbank financial services and products through four business segments: Consumer Banking, Global Wealth & Investment Management (GWIM), Global Banking and Global Markets, with the remaining operations recorded in All Other. We operate our banking activities primarily under the Bank of America, National Association (Bank of America, N.A. or BANA) charter. At September 30, 2016, the Corporation had approximately \$2.2 trillion in assets and approximately 209,000 full-time equivalent employees.

At September 30, 2016, we operated in all 50 states, the District of Columbia, the U.S. Virgin Islands, Puerto Rico and more than 35 countries. Our retail banking footprint covers approximately 80 percent of the U.S. population, and we serve approximately 47 million consumer and small business relationships with approximately 4,600 retail financial centers, approximately 16,000 ATMs, and leading online ([www.bankofamerica.com](http://www.bankofamerica.com)) and mobile banking platforms with approximately 34 million active accounts and more than 21 million mobile active users. We offer industry-leading support to approximately three million small business owners. Our wealth management businesses, with client balances of approximately \$2.5 trillion, provide tailored solutions to meet client needs through a full set of investment management, brokerage, banking, trust and retirement products. We are a global leader in corporate and investment banking and trading across a broad range of asset classes, serving corporations, governments, institutions and individuals around the world.

### Third-Quarter 2016 Economic and Business Environment

In the third quarter of 2016, the macroeconomic environment in the U.S. was mixed. Continued strengthening in the labor market and a rebound in gross domestic product (GDP) growth were offset by continued weakness in certain sectors. The unemployment rate remained slightly below five percent, close to what is generally regarded as the natural rate of unemployment. However, retail sales and industrial production declined. Manufacturing output was weak, and businesses remained reluctant to invest in equipment and software. The economic pick-up during the quarter stemmed from continued moderate growth in domestic demand, largely reflecting consumption gains, along with a rebound in exports and signs that businesses may have passed the peak of their inventory reductions. Overall, these were minimal changes in the U.S. macroeconomic environment in comparison to the prior quarter.

Oil prices were generally stable over the quarter. Core inflation maintained the momentum gained early in the year, but remained below the Board of Governors of the Federal Reserve System's (Federal Reserve) longer-term annual target of two percent. Treasury yields fell during the quarter, reaching their lows in mid-July. Corporate spreads narrowed on the perception of an improving U.S. economy and strong international demand due to negative rates in Europe and Japan. U.S. equities rose moderately.

The Federal Open Market Committee (FOMC) cited continued improvement in the labor market and progress toward meeting the requirements for another interest rate hike. However, the low level of inflation and weak spots in the economy kept the FOMC on hold regarding the increase in rates.

Following the U.K.'s Referendum on exiting the European Union (EU) (U.K. Referendum) in June, economic indicators in the U.K. proved resilient despite the risk of negative growth during the third quarter. The unemployment



rate in the U.K., for instance, remained below five percent. Economic momentum in the eurozone was sustained despite the U.K. Referendum, with available indicators pointing to moderate expansion in the third quarter. However, political uncertainty remained elevated and continued to impact financial markets. The European Central Bank maintained accommodative conditions, but did not commit to a possible extension of quantitative easing beyond March 2017. Government bond yields remained low, with German 10-year Bund yields remaining in negative territory.

Amid persistently low inflation, the Bank of Japan introduced a new policy focusing on maintaining the 10-year government bond yield near zero percent. In early July, a coup attempt in Turkey increased political instability, although the current government remained in power and financial market reaction outside of Turkey was minimal. The Chinese economy was stable during the quarter, but real estate remained a major concern.

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## Recent Events

## Change in Accounting Method Related to Certain Debt Securities

Effective July 1, 2016, the Corporation changed its accounting method for the amortization of premiums and accretion of discounts related to certain debt securities under the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 310-20, Nonrefundable fees and other costs, from the prepayment method (also referred to as the retrospective method), to the contractual method. All prior periods presented herein have been restated to conform to current period presentation. Under the applicable bank regulatory rules, we are not required to and, accordingly, will not restate previously-filed capital metrics and ratios. The cumulative impact of the change in accounting method would have resulted in an insignificant pro forma change to our capital metrics and ratios. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

## Capital Management

Our 2016 Comprehensive Capital Analysis and Review (CCAR) capital plan included requests (i) to repurchase \$5.0 billion of common stock over four quarters beginning in the third quarter of 2016, (ii) to repurchase common stock to offset the dilution resulting from certain equity-based compensation awards and (iii) to increase the quarterly common stock dividend from \$0.05 per share to \$0.075 per share. On June 29, 2016, following the Federal Reserve's non-objection to our 2016 CCAR capital plan, the Board of Directors (the Board) authorized the common stock repurchases described above. The common stock repurchase authorization includes both common stock and warrants. During the three months ended September 30, 2016, pursuant to the Board's authorization, we repurchased \$1.4 billion of common stock, which includes common stock to offset equity-based compensation awards. On July 27, 2016, the Board declared a quarterly common stock dividend of \$0.075 per share, payable on September 23, 2016 to shareholders of record as of September 2, 2016. For additional information, see the Corporation's Current Report on Form 8-K as filed on June 29, 2016.

## Selected Financial Data

Table 1 provides selected consolidated financial data for the three and nine months ended September 30, 2016 and 2015, and at September 30, 2016 and December 31, 2015.

Table 1  
Selected Financial Data

(Dollars in millions, except per share information)	Three Months Ended		Nine Months Ended			
	September 30		September 30			
	2016	2015	2016	2015		
Income statement						
Revenue, net of interest expense	\$21,635	\$20,992	\$63,711	\$63,383		
Net income	4,955	4,619	13,210	12,552		
Diluted earnings per common share	0.41	0.38	1.10	1.03		
Dividends paid per common share	0.075	0.05	0.175	0.15		
Performance ratios						
Return on average assets	0.90	% 0.84	% 0.81	% 0.78		%
Return on average common shareholders' equity	7.27	7.16	6.61	6.67		
Return on average tangible common shareholders' equity <sup>(1)</sup>	10.28	10.40	9.40	9.74		
Efficiency ratio	62.31	66.40	65.59	68.98		

	September 30 2016	December 31 2015
Balance sheet		
Total loans and leases	\$ 905,008	\$ 896,983
Total assets	2,195,314	2,144,287
Total deposits	1,232,895	1,197,259
Total common shareholders' equity	244,863	233,903
Total shareholders' equity	270,083	256,176

(1) Return on average tangible common shareholders' equity is a non-GAAP financial measure. For more information and a corresponding reconciliation to GAAP financial measures, see Supplemental Financial Data on page 13.

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## Financial Highlights

Net income was \$5.0 billion, or \$0.41 per diluted share, and \$13.2 billion, or \$1.10 per diluted share for the three and nine months ended September 30, 2016 compared to \$4.6 billion, or \$0.38, and \$12.6 billion, or \$1.03 for the same periods in 2015. The results for the three months ended September 30, 2016 compared to the prior-year period were primarily driven by increased revenue and lower noninterest expense. The results for the nine months ended September 30, 2016 compared to the prior-year period were primarily driven by lower noninterest expense and increased revenue, offset by higher provision for credit losses.

Total assets increased \$51.0 billion from December 31, 2015 to \$2.2 trillion at September 30, 2016 primarily driven by higher securities borrowed or purchased under agreements to resell due to increased customer financing activity, an increase in debt securities driven by the deployment of deposit inflows, higher trading account assets, and an increase in loans and leases driven by demand for commercial loans outpacing consumer loan sales and run-off. Total liabilities increased \$37.1 billion from December 31, 2015 to \$1.9 trillion at September 30, 2016 primarily driven by increases in deposits and trading account liabilities, partially offset by a decrease in long-term debt. Shareholders' equity increased \$13.9 billion from December 31, 2015 driven by earnings, an increase in accumulated other comprehensive income (OCI) due to a positive net change in the fair value of available-for-sale (AFS) debt securities as a result of lower interest rates, and preferred stock issuances, partially offset by returns of capital to shareholders of \$6.9 billion through common and preferred stock dividends and common stock repurchases.

Table 2  
Summary Income Statement

	Three Months		Nine Months	
	Ended		Ended September	
	September 30		30	
(Dollars in millions)	2016	2015	2016	2015
Net interest income	\$10,201	\$9,900	\$30,804	\$29,272
Noninterest income	11,434	11,092	32,907	34,111
Total revenue, net of interest expense	21,635	20,992	63,711	63,383
Provision for credit losses	850	806	2,823	2,351
Noninterest expense	13,481	13,939	41,790	43,724
Income before income taxes	7,304	6,247	19,098	17,308
Income tax expense	2,349	1,628	5,888	4,756
Net income	4,955	4,619	13,210	12,552
Preferred stock dividends	503	441	1,321	1,153
Net income applicable to common shareholders	\$4,452	\$4,178	\$11,889	\$11,399
Per common share information				
Earnings	\$0.43	\$0.40	\$1.15	\$1.09
Diluted earnings	0.41	0.38	1.10	1.03

## Net Interest Income

Net interest income increased \$301 million to \$10.2 billion, and \$1.5 billion to \$30.8 billion for the three and nine months ended September 30, 2016 compared to the same periods in 2015. The net interest yield increased four basis points (bps) to 2.18 percent, and six bps to 2.21 percent. The increases for the three- and nine- month periods were primarily driven by growth in commercial loans, the impact from higher short-end interest rates and increased debt securities balances.



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## Noninterest Income

Table 3

## Noninterest Income

	Three Months		Nine Months	
	Ended September 30		Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Card income	\$1,455	\$1,510	\$4,349	\$4,381
Service charges	1,952	1,898	5,660	5,519
Investment and brokerage services	3,160	3,336	9,543	10,101
Investment banking income	1,458	1,287	4,019	4,300
Trading account profits	2,141	1,616	5,821	5,510
Mortgage banking income	589	407	1,334	2,102
Gains on sales of debt securities	51	437	490	886
Other income	628	601	1,691	1,312
Total noninterest income	\$11,434	\$11,092	\$32,907	\$34,111

Noninterest income increased \$342 million to \$11.4 billion, and decreased \$1.2 billion to \$32.9 billion for the three and nine months ended September 30, 2016 compared to the same periods in 2015. The following highlights the significant changes.

Investment and brokerage services income decreased \$176 million and \$558 million driven by lower market valuations and lower transactional revenue, partially offset by the impact of long-term assets under management (AUM) flows.

Investment banking income increased \$171 million for the three-month period primarily driven by an increase in debt and equity issuance fees, partially offset by lower advisory fees. Investment banking income decreased \$281 million for the nine-month period driven by lower equity issuance and advisory fees due to a decline in market fee pools.

Trading account profits increased \$525 million and \$311 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015 primarily due to a stronger performance globally across credit products led by mortgages and continued strength in rates products, partially offset by reduced client activity in equities.

Mortgage banking income increased \$182 million for the three-month period primarily due to favorable mortgage servicing rights (MSR) results, net of the related hedge performance, partially offset by a decline in production income. Mortgage banking income decreased \$768 million for the nine-month period primarily driven by a decline in production revenue, a provision for representations and warranties in the current-year period compared to a benefit in the prior-year period, as well as lower servicing fees, partially offset by favorable MSR results, net of the related hedge performance.

Other income increased \$27 million and \$379 million primarily due to lower debit valuation adjustment (DVA) losses on structured liabilities, as well as improved results from loans and the related hedging activities in the fair value option portfolio, partially offset by lower gains on asset sales. DVA losses related to structured liabilities were \$24 million and \$77 million for the three and nine months ended September 30, 2016 compared to \$54 million and \$604 million in the same periods in 2015.

## Provision for Credit Losses

The provision for credit losses increased \$44 million to \$850 million, and \$472 million to \$2.8 billion for the three and nine months ended September 30, 2016 compared to the same periods in 2015 due to a slower pace of credit quality improvement and, for the nine-month period, an increase in energy sector reserves for the higher risk energy sub-sectors. For more information on the provision for credit losses, see Provision for Credit Losses on page 79. For more information on our energy sector exposure, see Commercial Portfolio Credit Risk Management – Industry Concentrations on page 74.

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## Noninterest Expense

Table 4

## Noninterest Expense

	Three Months		Nine Months	
	Ended September 30		Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Personnel	\$7,704	\$7,829	\$24,278	\$25,333
Occupancy	1,005	1,028	3,069	3,082
Equipment	443	499	1,357	1,511
Marketing	410	445	1,243	1,330
Professional fees	536	673	1,433	1,588
Amortization of intangibles	181	207	554	632
Data processing	685	731	2,240	2,298
Telecommunications	189	210	551	583
Other general operating	2,328	2,317	7,065	7,367
Total noninterest expense	\$13,481	\$13,939	\$41,790	\$43,724

Noninterest expense decreased \$458 million to \$13.5 billion, and \$1.9 billion to \$41.8 billion for the three and nine months ended September 30, 2016 compared to the same periods in 2015. Personnel expense decreased \$125 million and \$1.1 billion as we continue to manage headcount and achieve cost savings. Continued expense management, as well as the expiration of certain advisor retention awards, more than offset the increases in client-facing professionals. Other general operating expense decreased \$302 million for the nine-month period compared to the same period in 2015 primarily driven by lower foreclosed properties expense and lower brokerage fees, partially offset by higher FDIC expense.

## Income Tax Expense

Table 5

## Income Tax Expense

	Three Months		Nine Months Ended		
	Ended September 30		September 30		
(Dollars in millions)	2016	2015	2016	2015	
Income before income taxes	\$7,304	\$6,247	\$19,098	\$17,308	
Income tax expense	2,349	1,628	5,888	4,756	
Effective tax rate	32.2	% 26.1	% 30.8	% 27.5	%

The effective tax rates for the three and nine months ended September 30, 2016 were driven by our recurring tax preference benefits, and included the \$350 million charge for the impact of the U.K. tax law changes discussed below. The effective tax rates for the three and nine months ended September 30, 2015 were driven by our recurring tax preference benefits, as well as benefits related to certain non-U.S. restructurings.

The U.K. Finance Bill 2016 was enacted on September 15, 2016. The changes include reducing the U.K. corporate income tax rate by one percent to 17 percent, effective April 1, 2020. This reduction favorably affects income tax expense on future U.K. earnings, but required a remeasurement of our U.K. net deferred tax assets using the lower tax rate. Accordingly, upon enactment, we recorded an income tax charge of approximately \$350 million. In addition, for banking companies, the portion of U.K. taxable income that can be reduced by existing net operating loss



carryforwards in any one taxable year has been reduced from 50 percent to 25 percent retroactive to April 1, 2016.

The majority of our U.K. deferred tax assets, which consist primarily of net operating losses, are expected to be realized by certain subsidiaries over a number of years. Significant changes to management's earnings forecasts for those subsidiaries, such as changes caused by a substantial and prolonged worsening of the condition of Europe's capital markets, changes in applicable laws, further changes in tax laws or changes in the ability of our U.K. subsidiaries to conduct business in the EU, could lead management to reassess our ability to realize the U.K. deferred tax assets.

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Selected Quarterly Financial Data

(In millions, except per share information)	2016 Quarters			2015 Quarters		
	Third	Second	First	Fourth	Third	
Income statement						
Net interest income	\$ 10,201	\$ 10,118	\$ 10,485	\$ 9,686	\$ 9,900	
Noninterest income	11,434	11,168	10,305	9,896	11,092	
Total revenue, net of interest expense	21,635	21,286	20,790	19,582	20,992	
Provision for credit losses	850	976	997	810	806	
Noninterest expense	13,481	13,493	14,816	14,010	13,939	
Income before income taxes	7,304	6,817	4,977	4,762	6,247	
Income tax expense	2,349	2,034	1,505	1,478	1,628	
Net income	4,955	4,783	3,472	3,284	4,619	
Net income applicable to common shareholders	4,452	4,422	3,015	2,954	4,178	
Average common shares issued and outstanding	10,250	10,328	10,370	10,399	10,444	
Average diluted common shares issued and outstanding	11,000	11,059	11,100	11,153	11,197	
Performance ratios						
Return on average assets	0.90	% 0.88	% 0.64	% 0.60	% 0.84	%
Four quarter trailing return on average assets <sup>(1)</sup>	0.76	0.74	0.73	0.73	0.74	
Return on average common shareholders' equity	7.27	7.40	5.11	4.99	7.16	
Return on average tangible common shareholders' equity <sup>(2)</sup>	10.28	10.54	7.33	7.19	10.40	
Return on average shareholders' equity	7.33	7.25	5.36	5.07	7.22	
Return on average tangible shareholders' equity <sup>(2)</sup>	9.98	9.93	7.40	7.04	10.08	
Total ending equity to total ending assets	12.30	12.23	12.03	11.95	11.88	
Total average equity to total average assets	12.28	12.13	11.98	11.79	11.70	
Dividend payout	17.32	11.73	17.13	17.57	12.48	
Per common share data						
Earnings	\$0.43	\$0.43	\$0.29	\$0.28	\$0.40	
Diluted earnings	0.41	0.41	0.28	0.27	0.38	
Dividends paid	0.075	0.05	0.05	0.05	0.05	
Book value	24.19	23.71	23.14	22.53	22.40	
Tangible book value <sup>(2)</sup>	17.14	16.71	16.19	15.62	15.50	
Market price per share of common stock						
Closing	\$ 15.65	\$ 13.27	\$ 13.52	\$ 16.83	\$ 15.58	
High closing	16.19	15.11	16.43	17.95	18.45	
Low closing	12.74	12.18	11.16	15.38	15.26	
Market capitalization	\$ 158,438	\$ 135,577	\$ 139,427	\$ 174,700	\$ 162,457	

(1) Calculated as total net income for four consecutive quarters divided by annualized average assets for four consecutive quarters.

Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For

(2) more information on these ratios and for corresponding reconciliations to GAAP financial measures, see Supplemental Financial Data on page 13.

(3) For more information on the impact of the purchased credit-impaired (PCI) loan portfolio on asset quality, see Consumer Portfolio Credit Risk Management on page 52.

(4) Includes the allowance for loan and lease losses and the reserve for unfunded lending commitments.

(5) Balances and ratios do not include loans accounted for under the fair value option. For additional exclusions from nonperforming loans, leases and foreclosed properties, see Consumer Portfolio Credit Risk Management –

Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity on page 65 and corresponding Table 35, and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 73 and corresponding Table 42.

- (6) Primarily includes amounts allocated to the U.S. credit card and unsecured consumer lending portfolios in Consumer Banking, PCI loans and the non-U.S. credit card portfolio in All Other.  
Net charge-offs exclude \$83 million, \$82 million, \$105 million, \$82 million and \$148 million of write-offs in the
- (7) PCI loan portfolio in the third, second and first quarters of 2016 and in the fourth and third quarters of 2015, respectively. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.  
Risk-based capital ratios reported under Basel 3 Advanced - Transition beginning in the fourth quarter of 2015.
- (8) Prior to the fourth quarter of 2015, we were required to report risk-based capital ratios under Basel 3 Standardized - Transition only. For additional information, see Capital Management on page 39.

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Table 6

## Selected Quarterly Financial Data (continued)

(Dollars in millions)	2016 Quarters			2015 Quarters		
	Third	Second	First	Fourth	Third	
Average balance sheet						
Total loans and leases	\$900,594	\$899,670	\$892,984	\$886,156	\$877,429	
Total assets	2,189,490	2,188,241	2,173,922	2,180,507	2,168,930	
Total deposits	1,227,186	1,213,291	1,198,455	1,186,051	1,159,231	
Long-term debt	227,269	233,061	233,654	237,384	240,520	
Common shareholders' equity	243,679	240,376	237,229	234,800	231,524	
Total shareholders' equity	268,899	265,354	260,423	257,074	253,798	
Asset quality <sup>(3)</sup>						
Allowance for credit losses <sup>(4)</sup>	\$12,459	\$12,587	\$12,696	\$12,880	\$13,318	
Nonperforming loans, leases and foreclosed properties <sup>(5)</sup>	8,737	8,799	9,281	9,836	10,336	
Allowance for loan and lease losses as a percentage of total loans and leases outstanding <sup>(5)</sup>	1.30	% 1.32	% 1.35	% 1.37	% 1.45	%
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases <sup>(5)</sup>	140	142	136	130	129	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the PCI loan portfolio <sup>(5)</sup>	135	135	129	122	120	
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(6)</sup>	\$4,068	\$4,087	\$4,138	\$4,518	\$4,682	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(5, 6)</sup>	91	% 93	% 90	% 82	% 81	%
Net charge-offs <sup>(7)</sup>	\$888	\$985	\$1,068	\$1,144	\$932	
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(5, 7)</sup>	0.40	% 0.44	% 0.48	% 0.52	% 0.43	%
Annualized net charge-offs as a percentage of average loans and leases outstanding, excluding the PCI loan portfolio <sup>(5)</sup>	0.40	0.45	0.49	0.53	0.43	
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding <sup>(5)</sup>	0.43	0.48	0.53	0.55	0.49	
Nonperforming loans and leases as a percentage of total loans and leases outstanding <sup>(5)</sup>	0.93	0.94	0.99	1.05	1.12	
Nonperforming loans, leases and foreclosed properties as a percentage of total loans, leases and foreclosed properties <sup>(5)</sup>	0.97	0.98	1.04	1.10	1.18	
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs <sup>(7)</sup>	3.31	2.99	2.81	2.70	3.42	
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs, excluding the PCI loan portfolio	3.18	2.85	2.67	2.52	3.18	
	3.03	2.76	2.56	2.52	2.95	

Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs and PCI write-offs

Capital ratios at period end

Risk-based capital: <sup>(8)</sup>

Common equity tier 1 capital	11.0	% 10.6	% 10.3	% 10.2	% 11.6	%
Tier 1 capital	12.4	12.0	11.5	11.3	12.9	
Total capital	14.2	13.9	13.4	13.2	15.8	
Tier 1 leverage	9.1	8.9	8.7	8.6	8.5	
Tangible equity <sup>(2)</sup>	9.4	9.3	9.1	8.9	8.8	
Tangible common equity <sup>(2)</sup>	8.2	8.1	7.9	7.8	7.8	

For footnotes see page 9.

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Table 7  
Selected Year-to-Date Financial Data

(In millions, except per share information)	Nine Months Ended	
	September 30	
	2016	2015
Income statement		
Net interest income	\$30,804	\$29,272
Noninterest income	32,907	34,111
Total revenue, net of interest expense	63,711	63,383
Provision for credit losses	2,823	2,351
Noninterest expense	41,790	43,724
Income before income taxes	19,098	17,308
Income tax expense	5,888	4,756
Net income	13,210	12,552
Net income applicable to common shareholders	11,889	11,399
Average common shares issued and outstanding	10,313	10,483
Average diluted common shares issued and outstanding	11,047	11,234
Performance ratios		
Return on average assets	0.81	% 0.78
Return on average common shareholders' equity	6.61	6.67
Return on average tangible common shareholders' equity <sup>(1)</sup>	9.40	9.74
Return on average shareholders' equity	6.66	6.71
Return on average tangible shareholders' equity <sup>(1)</sup>	9.13	9.42
Total ending equity to total ending assets	12.30	11.88
Total average equity to total average assets	12.13	11.62
Dividend payout	15.19	13.78
Per common share data		
Earnings	\$1.15	\$1.09
Diluted earnings	1.10	1.03
Dividends paid	0.175	0.15
Book value	24.19	22.40
Tangible book value <sup>(1)</sup>	17.14	15.50
Market price per share of common stock		
Closing	\$15.65	\$15.58
High closing	16.43	18.45
Low closing	11.16	15.15
Market capitalization	\$158,438	\$162,457

Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For

- (1) more information on these ratios and for corresponding reconciliations to GAAP financial measures, see Supplemental Financial Data on page 13.
- (2) For more information on the impact of the PCI loan portfolio on asset quality, see Consumer Portfolio Credit Risk Management on page 52.
- (3) Includes the allowance for loan and lease losses and the reserve for unfunded lending commitments. Balances and ratios do not include loans accounted for under the fair value option. For additional exclusions from nonperforming loans, leases and foreclosed properties, see Consumer Portfolio Credit Risk Management – Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity on page 65 and corresponding Table 35, and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 73 and corresponding Table 42.
- (5)

Primarily includes amounts allocated to the U.S. credit card and unsecured consumer lending portfolios in Consumer Banking, PCI loans and the non-U.S. credit card portfolio in All Other.

Net charge-offs exclude \$270 million and \$726 million of write-offs in the PCI loan portfolio for the nine months<sup>(6)</sup> ended September 30, 2016 and 2015. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.

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Table 7  
Selected Year-to-Date Financial Data (continued)

(Dollars in millions)	Nine Months Ended September 30			
	2016	2015		
Average balance sheet				
Total loans and leases	\$897,760	\$873,630		
Total assets	2,183,905	2,153,353		
Total deposits	1,213,029	1,145,686		
Long-term debt	231,313	240,960		
Common shareholders' equity	240,440	228,614		
Total shareholders' equity	264,907	250,265		
Asset quality <sup>(2)</sup>				
Allowance for credit losses <sup>(3)</sup>	\$12,459	\$13,318		
Nonperforming loans, leases and foreclosed properties <sup>(4)</sup>	8,737	10,336		
Allowance for loan and lease losses as a percentage of total loans and leases outstanding <sup>(4)</sup>	1.30	%	1.45	%
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases <sup>(4)</sup>	140	129		
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the PCI loan portfolio <sup>(4)</sup>	135	120		
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(5)</sup>	\$4,068	\$4,682		
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(4, 5)</sup>	91	%	81	%
Net charge-offs <sup>(6)</sup>	\$2,941	\$3,194		
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(4, 6)</sup>	0.44	%	0.49	%
Annualized net charge-offs as a percentage of average loans and leases outstanding, excluding the PCI loan portfolio <sup>(4)</sup>	0.45	0.50		
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding <sup>(4)</sup>	0.48	0.61		
Nonperforming loans and leases as a percentage of total loans and leases outstanding <sup>(4)</sup>	0.93	1.12		
Nonperforming loans, leases and foreclosed properties as a percentage of total loans, leases and foreclosed properties <sup>(4)</sup>	0.97	1.18		
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs <sup>(6)</sup>	2.98	2.96		
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs, excluding the PCI loan portfolio	2.86	2.76		
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs and PCI write-offs	2.73	2.41		

For footnotes see page 11.



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### Supplemental Financial Data

In this Form 10-Q, we present certain non-GAAP financial measures. Non-GAAP financial measures exclude certain items or otherwise include components that differ from the most directly comparable measures calculated in accordance with GAAP. Non-GAAP financial measures are provided as additional useful information to assess our financial condition, results of operations (including period-to-period operating performance) or compliance with prospective regulatory requirements. These non-GAAP financial measures are not intended as a substitute for GAAP financial measures and may not be defined or calculated the same way as non-GAAP financial measures used by other companies.

We view net interest income and related ratios and analyses on an fully taxable-equivalent (FTE) basis, which when presented on a consolidated basis, are non-GAAP financial measures. To derive the FTE basis, net interest income is adjusted to reflect tax-exempt income on an equivalent before-tax basis with a corresponding increase in income tax expense. For purposes of this calculation, we use the federal statutory tax rate of 35 percent and a representative state tax rate. In addition, certain performance measures including the efficiency ratio and net interest yield utilize net interest income (and thus total revenue) on an FTE basis. The efficiency ratio measures the costs expended to generate a dollar of revenue, and net interest yield measures the bps we earn over the cost of funds. We believe that presentation of these items on an FTE basis allows for comparison of amounts from both taxable and tax-exempt sources and is consistent with industry practices.

We may present certain key performance indicators and ratios excluding certain items (e.g., DVA) which result in non-GAAP financial measures. We believe that the presentation of measures that exclude these items are useful because they provide additional information to assess the underlying operational performance and trends of our businesses and to allow better comparison of period-to-period operating performance.

We also evaluate our business based on certain ratios that utilize tangible equity, a non-GAAP financial measure. Tangible equity represents an adjusted shareholders' equity or common shareholders' equity amount which has been reduced by goodwill and certain acquired intangible assets (excluding MSRs), net of related deferred tax liabilities. These measures are used to evaluate our use of equity. In addition, profitability, relationship and investment models use both return on average tangible common shareholders' equity and return on average tangible shareholders' equity as key measures to support our overall growth goals. These ratios are as follows:

Return on average tangible common shareholders' equity measures our earnings contribution as a percentage of adjusted common shareholders' equity. The tangible common equity ratio represents adjusted ending common shareholders' equity divided by total assets less goodwill and certain acquired intangible assets (excluding MSRs), net of related deferred tax liabilities.

Return on average tangible shareholders' equity measures our earnings contribution as a percentage of adjusted average total shareholders' equity. The tangible equity ratio represents adjusted ending shareholders' equity divided by total assets less goodwill and certain acquired intangible assets (excluding MSRs), net of related deferred tax liabilities.

Tangible book value per common share represents adjusted ending common shareholders' equity divided by ending common shares outstanding.

We believe that the use of ratios that utilize tangible equity provides additional useful information because they present measures of those assets that can generate income. Tangible book value per share provides additional useful information about the level of tangible assets in relation to outstanding shares of common stock.

The aforementioned supplemental data and performance measures are presented in Tables 6 and 7.

Table 8 presents certain non-GAAP financial measures and performance measurements on an FTE basis.

Table 8

Supplemental Financial Data

(Dollars in millions)	Three Months Ended		Nine Months Ended	
	September 30		September 30	
	2016	2015	2016	2015
Fully taxable-equivalent basis data				
Net interest income	\$10,429	\$10,127	\$31,470	\$29,936
Total revenue, net of interest expense	21,863	21,219	64,377	64,047
Net interest yield	2.23	% 2.19	% 2.26	% 2.20
Efficiency ratio	61.66	65.70	64.91	68.27

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Tables 9 and 10 provide reconciliations of these non-GAAP financial measures to GAAP financial measures.

Table 9

## Quarterly and Year-to-Date Supplemental Financial Data and Reconciliations to GAAP Financial Measures

(Dollars in millions)	Three Months Ended September 30			2015		
	2016	2016	2016	2015	2015	2015
	As Reported	Fully taxable-equivalent adjustment	Fully taxable-equivalent basis	As Reported	Fully taxable-equivalent adjustment	Fully taxable-equivalent basis
Net interest income	\$ 10,201	\$ 228	\$ 10,429	\$ 9,900	\$ 227	\$ 10,127
Total revenue, net of interest expense	21,635	228	21,863	20,992	227	21,219
Income tax expense	2,349	228	2,577	1,628	227	1,855
	Nine Months Ended September 30					
	2016	2016	2016	2015	2015	2015
Net interest income	\$ 30,804	\$ 666	\$ 31,470	\$ 29,272	\$ 664	\$ 29,936
Total revenue, net of interest expense	63,711	666	64,377	63,383	664	64,047
Income tax expense	5,888	666	6,554	4,756	664	5,420

Table 10

## Period-end and Average Supplemental Financial Data and Reconciliations to GAAP Financial Measures

(Dollars in millions)	Period-end		Average		Nine Months Ended	
	September 30 2016	December 31 2015	Three Months Ended September 30 2016	Three Months Ended September 30 2015	September 30 2016	September 30 2015
Common shareholders' equity	\$ 244,863	\$ 233,903	\$ 243,679	\$ 231,524	\$ 240,440	\$ 228,614
Goodwill	(69,744 )	(69,761 )	(69,744 )	(69,774 )	(69,752 )	(69,775 )
Intangible assets (excluding MSRs)	(3,168 )	(3,768 )	(3,276 )	(4,099 )	(3,480 )	(4,307 )
Related deferred tax liabilities	1,588	1,716	1,628	1,811	1,666	1,885
Tangible common shareholders' equity	\$ 173,539	\$ 162,090	\$ 172,287	\$ 159,462	\$ 168,874	\$ 156,417
Shareholders' equity	\$ 270,083	\$ 256,176	\$ 268,899	\$ 253,798	\$ 264,907	\$ 250,265
Goodwill	(69,744 )	(69,761 )	(69,744 )	(69,774 )	(69,752 )	(69,775 )
Intangible assets (excluding MSRs)	(3,168 )	(3,768 )	(3,276 )	(4,099 )	(3,480 )	(4,307 )
Related deferred tax liabilities	1,588	1,716	1,628	1,811	1,666	1,885
Tangible shareholders' equity	\$ 198,759	\$ 184,363	\$ 197,507	\$ 181,736	\$ 193,341	\$ 178,068
Total assets	\$ 2,195,314	\$ 2,144,287				
Goodwill	(69,744 )	(69,761 )				
Intangible assets (excluding MSRs)	(3,168 )	(3,768 )				
Related deferred tax liabilities	1,588	1,716				
Tangible assets	\$ 2,123,990	\$ 2,072,474				



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Table 11

## Quarterly Average Balances and Interest Rates – FTE Basis

(Dollars in millions)	Third Quarter 2016			Third Quarter 2015		
	Average Balance	Interest Income/Expense	Yield/Rate	Average Balance	Interest Income/Expense	Yield/Rate
<b>Earning assets</b>						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$ 133,866	\$ 148	0.44 %	\$ 145,174	\$ 96	0.26 %
Time deposits placed and other short-term investments	9,336	34	1.45	11,503	38	1.32
Federal funds sold and securities borrowed or purchased under agreements to resell	214,254	267	0.50	210,127	275	0.52
Trading account assets	128,879	1,111	3.43	140,484	1,170	3.31
Debt securities	423,182	2,169	2.07	394,265	2,282	2.32
<b>Loans and leases <sup>(1)</sup>:</b>						
Residential mortgage	188,234	1,612	3.42	193,791	1,690	3.49
Home equity	70,603	681	3.84	79,715	730	3.64
U.S. credit card	88,210	2,061	9.30	88,201	2,033	9.15
Non-U.S. credit card	9,256	231	9.94	10,244	267	10.34
Direct/Indirect consumer <sup>(2)</sup>	92,870	585	2.51	85,975	515	2.38
Other consumer <sup>(3)</sup>	2,358	18	2.94	1,980	15	3.01
Total consumer	451,531	5,188	4.58	459,906	5,250	4.54
U.S. commercial	276,833	2,040	2.93	251,908	1,744	2.75
Commercial real estate <sup>(4)</sup>	57,606	452	3.12	53,605	384	2.84
Commercial lease financing	21,194	153	2.88	20,013	153	3.07
Non-U.S. commercial	93,430	599	2.55	91,997	514	2.22
Total commercial	449,063	3,244	2.87	417,523	2,795	2.66
Total loans and leases	900,594	8,432	3.73	877,429	8,045	3.65
Other earning assets	59,951	677	4.50	62,848	717	4.52
Total earning assets <sup>(5)</sup>	1,870,062	12,838	2.73	1,841,830	12,623	2.73
Cash and due from banks	27,361			27,730		
Other assets, less allowance for loan and lease losses	292,067			299,370		
Total assets	\$2,189,490			\$2,168,930		
<b>Interest-bearing liabilities</b>						
<b>U.S. interest-bearing deposits:</b>						
Savings	\$49,885	\$ 2	0.01 %	\$46,297	\$ 2	0.02 %
NOW and money market deposit accounts	592,907	73	0.05	545,741	67	0.05
Consumer CDs and IRAs	48,695	33	0.27	53,174	38	0.29
Negotiable CDs, public funds and other deposits	32,023	43	0.54	30,631	26	0.33
Total U.S. interest-bearing deposits	723,510	151	0.08	675,843	133	0.08
<b>Non-U.S. interest-bearing deposits:</b>						
Banks located in non-U.S. countries	4,294	9	0.87	4,196	7	0.71
Governments and official institutions	1,391	3	0.61	1,654	1	0.33
Time, savings and other	59,340	103	0.70	53,793	73	0.53
Total non-U.S. interest-bearing deposits	65,025	115	0.71	59,643	81	0.54
Total interest-bearing deposits	788,535	266	0.13	735,486	214	0.12
Federal funds purchased, securities loaned or sold under agreements to repurchase and short-term borrowings	207,634	569	1.09	257,323	597	0.92
Trading account liabilities	73,452	244	1.32	77,443	342	1.75

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Long-term debt	227,269	1,330	2.33	240,520	1,343	2.22
Total interest-bearing liabilities <sup>(5)</sup>	1,296,890	2,409	0.74	1,310,772	2,496	0.76
Noninterest-bearing sources:						
Noninterest-bearing deposits	438,651			423,745		
Other liabilities	185,050			180,615		
Shareholders' equity	268,899			253,798		
Total liabilities and shareholders' equity	\$2,189,490			\$2,168,930		
Net interest spread			1.99%			1.97 %
Impact of noninterest-bearing sources			0.24			0.22
Net interest income/yield on earning assets		\$10,429	2.23%		\$10,127	2.19 %

Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is (1) generally recognized on a cost recovery basis. PCI loans were recorded at fair value upon acquisition and accrete interest income over the estimated life of the loan.

(2) Includes non-U.S. consumer loans of \$3.2 billion and \$4.0 billion for the three months ended September 30, 2016 and 2015.

(3) Includes consumer finance loans of \$501 million and \$605 million, consumer leases of \$1.7 billion and \$1.2 billion, and consumer overdrafts of \$187 million and \$177 million for the three months ended September 30, 2016 and 2015.

(4) Includes U.S. commercial real estate loans of \$54.3 billion and \$49.8 billion, and non-U.S. commercial real estate loans of \$3.3 billion and \$3.8 billion for the three months ended September 30, 2016 and 2015.

Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by \$64 million and \$8 million for the three months ended September 30, 2016 and 2015.

(5) Interest expense includes the impact of interest rate risk management contracts, which decreased interest expense on the underlying liabilities by \$560 million and \$590 million for the three months ended September 30, 2016 and 2015. For additional information, see Interest Rate Risk Management for the Banking Book on page 89.

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Table 12

Year-to-Date Average Balances and Interest Rates – FTE Basis

(Dollars in millions)	Nine Months Ended September 30					
	2016			2015		
	Average Balance	Interest Income/Expense	Yield/Rate	Average Balance	Interest Income/Expense	Yield/Rate
Earning assets						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$ 135,910	\$ 460	0.45 %	\$ 132,445	\$ 261	0.26 %
Time deposits placed and other short-term investments	8,784	101	1.54	9,366	105	1.50
Federal funds sold and securities borrowed or purchased under agreements to resell	215,476	803	0.50	212,781	774	0.49
Trading account assets	130,785	3,432	3.50	138,861	3,406	3.28
Debt securities	414,115	6,990	2.27	387,988	6,763	2.34
Loans and leases <sup>(1)</sup> :						
Residential mortgage	187,325	4,867	3.46	205,315	5,323	3.46
Home equity	73,015	2,095	3.83	82,404	2,269	3.68
U.S. credit card	87,362	6,065	9.27	88,117	6,040	9.17
Non-U.S. credit card	9,687	734	10.12	10,087	793	10.51
Direct/Indirect consumer <sup>(2)</sup>	91,291	1,698	2.48	83,481	1,510	2.42
Other consumer <sup>(3)</sup>	2,240	50	2.99	1,904	45	3.14
Total consumer	450,920	15,509	4.59	471,308	15,980	4.53
U.S. commercial	274,669	5,982	2.91	243,849	5,093	2.79
Commercial real estate <sup>(4)</sup>	57,550	1,320	3.06	50,792	1,113	2.93
Commercial lease financing	21,049	482	3.05	19,592	473	3.22
Non-U.S. commercial	93,572	1,748	2.50	88,089	1,478	2.24
Total commercial	446,840	9,532	2.85	402,322	8,157	2.71
Total loans and leases	897,760	25,041	3.72	873,630	24,137	3.69
Other earning assets	58,189	2,031	4.66	62,366	2,142	4.59
Total earning assets <sup>(5)</sup>	1,861,019	38,858	2.79	1,817,437	37,588	2.76
Cash and due from banks	28,041			28,726		
Other assets, less allowance for loan and lease losses	294,845			307,190		
Total assets	\$ 2,183,905			\$ 2,153,353		
Interest-bearing liabilities						
U.S. interest-bearing deposits:						
Savings	\$ 49,281	\$ 4	0.01 %	\$ 46,634	\$ 6	0.02 %
NOW and money market deposit accounts	584,896	216	0.05	537,974	205	0.05
Consumer CDs and IRAs	48,920	101	0.28	55,883	125	0.30
Negotiable CDs, public funds and other deposits	32,212	107	0.45	29,784	70	0.32
Total U.S. interest-bearing deposits	715,309	428	0.08	670,275	406	0.08
Non-U.S. interest-bearing deposits:						
Banks located in non-U.S. countries	4,218	28	0.90	4,633	24	0.70
Governments and official institutions	1,468	7	0.60	1,426	3	0.31
Time, savings and other	58,866	273	0.62	54,364	217	0.53
Total non-U.S. interest-bearing deposits	64,552	308	0.64	60,423	244	0.54
Total interest-bearing deposits	779,861	736	0.13	730,698	650	0.12
Federal funds purchased, securities loaned or sold under agreements to repurchase and short-term borrowings	215,131	1,808	1.12	251,231	1,868	0.99

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Trading account liabilities	73,176	778	1.42	77,996	1,071	1.84
Long-term debt	231,313	4,066	2.35	240,960	4,063	2.25
Total interest-bearing liabilities <sup>(5)</sup>	1,299,481	7,388	0.76	1,300,885	7,652	0.79
Noninterest-bearing sources:						
Noninterest-bearing deposits	433,168			414,988		
Other liabilities	186,349			187,215		
Shareholders' equity	264,907			250,265		
Total liabilities and shareholders' equity	\$2,183,905			\$2,153,353		
Net interest spread			2.03 %			1.97 %
Impact of noninterest-bearing sources			0.23			0.23
Net interest income/yield on earning assets		\$31,470	2.26 %		\$29,936	2.20 %

Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is generally recognized on a cost recovery basis. PCI loans were recorded at fair value upon acquisition and accrete interest income over the estimated life of the loan.

(1) Includes non-U.S. consumer loans of \$3.5 billion and \$4.0 billion for the nine months ended September 30, 2016 and 2015.

(2) Includes consumer finance loans of \$526 million and \$633 million, consumer leases of \$1.5 billion and \$1.1 billion, and consumer overdrafts of \$171 million and \$150 million for the nine months ended September 30, 2016 and 2015.

(3) Includes U.S. commercial real estate loans of \$54.1 billion and \$47.7 billion, and non-U.S. commercial real estate loans of \$3.4 billion and \$3.1 billion for the nine months ended September 30, 2016 and 2015.

Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by \$155 million and \$27 million for the nine months ended September 30, 2016 and 2015.

(5) Interest expense includes the impact of interest rate risk management contracts, which decreased interest expense on the underlying liabilities by \$1.7 billion and \$1.7 billion for the nine months ended September 30, 2016 and 2015. For additional information, see Interest Rate Risk Management for the Banking Book on page 89.



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Business Segment Operations

Segment Description and Basis of Presentation

We report our results of operations through the following four business segments: Consumer Banking, GWIM, Global Banking, and Global Markets, with the remaining operations recorded in All Other.

The Corporation periodically reviews capital allocated to its businesses and allocates capital annually during the strategic and capital planning processes. We utilize a methodology that considers the effect of regulatory capital requirements in addition to internal risk-based capital models. The Corporation's internal risk-based capital models use a risk-adjusted methodology incorporating each segment's credit, market, interest rate, business and operational risk components. For more information on the nature of these risks, see Managing Risk on page 39.

The change in accounting method for certain debt securities, as described in Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements, impacted the amount of residual net interest income that is allocated to the business segments.

For more information on the basis of presentation for business segments and reconciliations to consolidated total revenue, net income and period-end total assets, see Note 18 – Business Segment Information to the Consolidated Financial Statements.

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## Consumer Banking

(Dollars in millions)	Three Months Ended September 30						
	Deposits		Consumer Lending		Total Consumer Banking		% Change
	2016	2015	2016	2015	2016	2015	
Net interest income (FTE basis)	\$2,630	\$2,397	\$2,660	\$2,696	\$5,290	\$5,093	4 %
Noninterest income:							
Card income	2	2	1,216	1,246	1,218	1,248	(2 )
Service charges	1,071	1,057	1	—	1,072	1,057	1
Mortgage banking income	—	—	297	290	297	290	2
All other income (loss)	98	132	(7 )	161	91	293	(69 )
Total noninterest income	1,171	1,191	1,507	1,697	2,678	2,888	(7 )
Total revenue, net of interest expense (FTE basis)	3,801	3,588	4,167	4,393	7,968	7,981	<(1)
Provision for credit losses	43	58	655	465	698	523	33
Noninterest expense	2,395	2,501	1,976	2,210	4,371	4,711	(7 )
Income before income taxes (FTE basis)	1,363	1,029	1,536	1,718	2,899	2,747	6
Income tax expense (FTE basis)	511	370	575	620	1,086	990	10
Net income	\$852	\$659	\$961	\$1,098	\$1,813	\$1,757	3
Net interest yield (FTE basis)	1.73 %	1.72 %	4.31 %	4.64 %	3.30 %	3.46 %	%
Return on average allocated capital	28	22	17	21	21	21	
Efficiency ratio (FTE basis)	63.03	69.69	47.40	50.31	54.86	59.02	

## Balance Sheet

Average	Three Months Ended September 30						
	2016	2015	2016	2015	2016	2015	% Change
Total loans and leases	\$4,837	\$4,662	\$243,846	\$228,441	\$248,683	\$233,103	7 %
Total earning assets <sup>(1)</sup>	604,223	552,534	245,540	230,523	636,838	583,368	9
Total assets <sup>(1)</sup>	630,394	579,604	257,167	243,409	674,636	623,324	8
Total deposits	598,117	547,727	7,591	8,260	605,708	555,987	9
Allocated capital	12,000	12,000	22,000	21,000	34,000	33,000	3

<sup>(1)</sup> In segments and businesses where the total of liabilities and equity exceeds assets, we allocate assets from All Other to match the segments' and businesses' liabilities and allocated shareholders' equity. As a result, total earning assets and total assets of the businesses may not equal total Consumer Banking.

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	Nine Months Ended September 30						
	Deposits		Consumer Lending		Total Consumer Banking		
(Dollars in millions)	2016	2015	2016	2015	2016	2015	% Change
Net interest income (FTE basis)	\$7,940	\$ 7,083	\$7,885	\$ 8,116	\$15,825	\$ 15,199	4 %
Noninterest income:							
Card income	7	8	3,638	3,615	3,645	3,623	1
Service charges	3,079	3,055	1	1	3,080	3,056	1
Mortgage banking income	—	—	754	1,117	754	1,117	(32 )
All other income	312	355	4	163	316	518	(39 )
Total noninterest income	3,398	3,418	4,397	4,896	7,795	8,314	(6 )
Total revenue, net of interest expense (FTE basis)	11,338	10,501	12,282	13,012	23,620	23,513	<1
Provision for credit losses	132	145	1,823	1,517	1,955	1,662	18
Noninterest expense	7,227	7,354	6,097	6,725	13,324	14,079	(5 )
Income before income taxes (FTE basis)	3,979	3,002	4,362	4,770	8,341	7,772	7
Income tax expense (FTE basis)	1,473	1,103	1,615	1,756	3,088	2,859	8
Net income	\$2,506	\$ 1,899	\$2,747	\$ 3,014	\$5,253	\$ 4,913	7
Net interest yield (FTE basis)	1.79 %	1.74 %	4.39 %	4.74 %	3.39 %	3.53 %	
Return on average allocated capital	28	21	17	19	21	20	
Efficiency ratio (FTE basis)	63.74	70.02	49.64	51.69	56.41	59.88	

## Balance Sheet

	Nine Months Ended September 30						
	2016		2015		2016		2015
Average	2016	2015	2016	2015	2016	2015	% Change
Total loans and leases	\$4,787	\$ 4,733	\$238,404	\$ 226,666	\$243,191	\$ 231,399	5 %
Total earning assets <sup>(1)</sup>	591,913	545,708	239,870	228,681	623,840	576,309	8
Total assets <sup>(1)</sup>	618,466	572,723	251,610	241,916	662,133	616,559	7
Total deposits	586,334	540,850	7,170	8,363	593,504	549,213	8
Allocated capital	12,000	12,000	22,000	21,000	34,000	33,000	3
Period end	September 30	December 31	September 30	December 31	September 30	December 31	% Change
Total loans and leases	\$4,810	\$ 4,735	\$246,315	\$ 234,116	\$251,125	\$ 238,851	5 %
Total earning assets <sup>(1)</sup>	616,853	576,108	248,233	235,496	648,978	605,012	7
Total assets <sup>(1)</sup>	643,025	603,448	260,330	248,571	687,247	645,427	6
Total deposits	610,752	571,467	7,278	6,365	618,030	577,832	7

For footnote see page 18.

Consumer Banking, which is comprised of Deposits and Consumer Lending, offers a diversified range of credit, banking and investment products and services to consumers and small businesses. Our customers and clients have access to a franchise network that stretches coast to coast through 33 states and the District of Columbia. The franchise network includes approximately 4,600 financial centers, 16,000 ATMs, nationwide call centers, and online

and mobile platforms.

### Consumer Banking Results

Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for Consumer Banking increased \$56 million to \$1.8 billion primarily driven by lower noninterest expense, partially offset by higher provision for credit losses. Revenue remained relatively unchanged at \$8.0 billion. Net interest income increased \$197 million to \$5.3 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits. Noninterest income decreased \$210 million to \$2.7 billion as the prior-year period included gains on certain divestitures.

The provision for credit losses increased \$175 million to \$698 million primarily driven by a slower pace of improvement in the credit card portfolio. Noninterest expense decreased \$340 million to \$4.4 billion primarily driven by improved operating efficiencies and lower fraud costs, partially offset by higher FDIC expense.

The return on average allocated capital remained unchanged at 21 percent. For more information on capital allocations, see Business Segment Operations on page 17.

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Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net income for Consumer Banking increased \$340 million to \$5.3 billion. Net interest income increased \$626 million to \$15.8 billion primarily driven by the same factor as described in the three-month discussion above. Noninterest income decreased \$519 million to \$7.8 billion due to lower mortgage banking income and gains in the prior-year period on certain divestitures, partially offset by higher service charges and higher card income.

The provision for credit losses increased \$293 million to \$2.0 billion and noninterest expense decreased \$755 million to \$13.3 billion, both primarily driven by the same factors as described in the three-month discussion above.

The return on average allocated capital was 21 percent, up from 20 percent, reflecting higher net income.

Deposits

Deposits includes the results of consumer deposit activities which consist of a comprehensive range of products provided to consumers and small businesses. Our deposit products include traditional savings accounts, money market savings accounts, CDs and IRAs, noninterest- and interest-bearing checking accounts, as well as investment accounts and products. The revenue is allocated to the deposit products using our funds transfer pricing process that matches assets and liabilities with similar interest rate sensitivity and maturity characteristics. Deposits generates fees such as account service fees, non-sufficient funds fees, overdraft charges and ATM fees, as well as investment and brokerage fees from Merrill Edge accounts. Merrill Edge is an integrated investing and banking service targeted at customers with less than \$250,000 in investable assets. Merrill Edge provides investment advice and guidance, client brokerage asset services, a self-directed online investing platform and key banking capabilities including access to the Corporation's network of financial centers and ATMs.

Deposits includes the net impact of migrating customers and their related deposit and brokerage asset balances between Deposits and GWIM as well as other client-managed businesses. For more information on the migration of customer balances to or from GWIM, see GWIM on page 25.

Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for Deposits increased \$193 million to \$852 million driven by higher revenue and lower noninterest expense. Net interest income increased \$233 million to \$2.6 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits. Noninterest income decreased \$20 million to \$1.2 billion due to gains in the prior-year period on certain divestitures, partially offset by higher service charges.

The provision for credit losses decreased \$15 million to \$43 million. Noninterest expense decreased \$106 million to \$2.4 billion primarily driven by improved operating efficiencies, partially offset by higher FDIC expense.

Average deposits increased \$50.4 billion to \$598.1 billion driven by a continuing customer shift to more liquid products in the low rate environment. Growth in checking, traditional savings and money market savings of \$55.6 billion was partially offset by a decline in time deposits of \$5.2 billion. As a result of our continued pricing discipline and the shift in the mix of deposits, the rate paid on average deposits declined by one bp to four bps.

Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net income for Deposits increased \$607 million to \$2.5 billion driven by higher revenue and lower noninterest expense. Net interest income increased \$857 million to \$7.9 billion primarily due to the same factor as described in the three-month discussion above. Noninterest income of \$3.4 billion remained relatively unchanged.

The provision for credit losses decreased \$13 million to \$132 million. Noninterest expense decreased \$127 million to \$7.2 billion driven by the same factors as described in the three-month discussion above.

Average deposits increased \$45.5 billion to \$586.3 billion driven by a continuing customer shift to more liquid products in the low rate environment.

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## Key Statistics – Deposits

	Three Months Ended		Nine Months Ended		
	September 30		September 30		
	2016	2015	2016	2015	
Total deposit spreads (excludes noninterest costs) <sup>(1)</sup>	1.64%	1.62%	1.65	% 1.61	%
Period end					
Client brokerage assets (in millions)			\$ 137,985	\$ 117,210	
Online banking active accounts (units in thousands)			33,722	31,627	
Mobile banking active users (units in thousands)			21,305	18,398	
Financial centers			4,629	4,741	
ATMs			15,959	16,062	

<sup>(1)</sup> Includes deposits held in Consumer Lending.

Client brokerage assets increased \$20.8 billion driven by underlying client flows and strong market performance. Mobile banking active users increased 2.9 million reflecting continuing changes in our customers' banking preferences. The number of financial centers declined 112 driven by changes in customer preferences to self-service options as we continue to optimize our consumer banking network and improve our cost-to-serve.

## Consumer Lending

Consumer Lending offers products to consumers and small businesses across the U.S. The products offered include credit and debit cards, residential mortgages and home equity loans, and direct and indirect loans such as automotive, recreational vehicle and consumer personal loans. In addition to earning net interest spread revenue on its lending activities, Consumer Lending generates interchange revenue from credit and debit card transactions, late fees, cash advance fees, annual credit card fees, mortgage banking fee income and other miscellaneous fees. Consumer Lending products are available to our customers through our retail network, direct telephone, and online and mobile channels. Consumer Lending results also include the impact of servicing residential mortgages and home equity loans in the core portfolio, including loans held on the balance sheet of Consumer Lending and loans serviced for others.

The Corporation classifies consumer real estate loans as core or non-core based on loan and customer characteristics such as origination date, product type, loan-to-value (LTV), Fair Isaac Corporation (FICO) score and delinquency status. At September 30, 2016, total owned loans in the core portfolio held in Consumer Lending were \$97.8 billion, up \$9.1 billion from September 30, 2015 primarily driven by higher residential mortgage balances, partially offset by a decline in home equity balances. For more information on the core and non-core portfolios, see Consumer Portfolio Credit Risk Management on page 52.

Consumer Lending includes the net impact of migrating customers and their related loan balances between Consumer Lending and GWIM. For more information on the migration of customer balances to or from GWIM, see GWIM on page 25.

## Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for Consumer Lending decreased \$137 million to \$961 million driven by a decline in noninterest income and higher provision for credit losses, partially offset by lower noninterest expense. Net interest income remained relatively unchanged at \$2.7 billion. Noninterest income decreased \$190 million to \$1.5 billion due to gains in the prior-year period on certain divestitures and lower card income.

The provision for credit losses increased \$190 million to \$655 million primarily driven by a slower pace of improvement in the credit card portfolio. Noninterest expense decreased \$234 million to \$2.0 billion primarily driven by improved operating efficiencies and lower fraud costs due to the benefit of the Europay, MasterCard and Visa (EMV) chip implementation.

Average loans increased \$15.4 billion to \$243.8 billion primarily driven by increases in residential mortgages and consumer vehicle loans, partially offset by lower home equity loans.



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## Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net income for Consumer Lending decreased \$267 million to \$2.7 billion. Net interest income decreased \$231 million to \$7.9 billion primarily driven by higher funding costs, partially offset by the impact of an increase in consumer auto lending balances. Noninterest income decreased \$499 million to \$4.4 billion driven by lower mortgage banking income and gains in the prior-year period on certain divestitures, partially offset by higher card income.

The provision for credit losses increased \$306 million to \$1.8 billion primarily driven by the same factor as described in the three-month discussion above. Noninterest expense decreased \$628 million to \$6.1 billion primarily driven by the same factors as described in the three-month discussion above, as well as lower personnel expense.

Average loans increased \$11.7 billion to \$238.4 billion primarily driven by the same factors as described in the three-month discussion above.

## Key Statistics – Consumer Lending

(Dollars in millions)	Three Months Ended		Nine Months Ended	
	September 30		September 30	
	2016	2015	2016	2015
Total U.S. credit card <sup>(1)</sup>				
Gross interest yield	9.30	% 9.15	% 9.27	% 9.17
Risk-adjusted margin	9.11	9.51	8.99	9.14
New accounts (in thousands)	1,324	1,257	3,845	3,713
Purchase volumes	\$57,591	\$56,472	\$165,412	\$162,625
Debit card purchase volumes	\$71,049	\$69,288	\$212,316	\$206,941

<sup>(1)</sup> In addition to the U.S. credit card portfolio in Consumer Banking, the remaining U.S. credit card portfolio is in GWIM.

During the three and nine months ended September 30, 2016, the total U.S. credit card risk-adjusted margin decreased 40 bps and 15 bps compared to the same periods in 2015. The decrease for the three-month period was primarily driven by the impact of a gain on a divestiture in the prior-year period, which was included in the risk-adjusted margin. Total U.S. credit card purchase volumes increased \$1.1 billion to \$57.6 billion, and \$2.8 billion to \$165.4 billion, and debit card purchase volumes increased \$1.8 billion to \$71.0 billion, and \$5.4 billion to \$212.3 billion, reflecting higher levels of consumer spending. The increases in total U.S. credit card purchase volumes were partially offset by the impact of certain divestitures.

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## Mortgage Banking Income

Mortgage banking income is earned primarily in Consumer Banking and All Other. Total production income within mortgage banking income is comprised primarily of revenue from the fair value gains and losses recognized on our interest rate lock commitments (IRLCs) and loans held-for-sale (LHFS), the related secondary market execution, and costs related to representations and warranties in the sales transactions along with other obligations incurred in the sales of mortgage loans. Servicing income within mortgage banking income includes income earned in connection with servicing activities and MSR valuation adjustments, net of results from risk management activities used to hedge certain market risks of the MSRs. Servicing income for the core portfolio is recorded in Consumer Banking. Servicing income for the non-core portfolio, including hedge ineffectiveness on MSR hedges, is recorded in All Other. The costs associated with our servicing activities are included in noninterest expense.

The table below summarizes the components of mortgage banking income. Amounts for other mortgage banking income are included in this Consumer Banking table to show the components of consolidated mortgage banking income.

## Mortgage Banking Income

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Mortgage banking income				
Consumer Banking mortgage banking income				
Total production income	\$212	\$223	\$532	\$801
Net servicing income				
Servicing fees	179	204	542	655
Amortization of expected cash flows <sup>(1)</sup>	(139 )	(159 )	(439 )	(506 )
Fair value changes of MSRs, net of risk management activities used to hedge certain market risks <sup>(2)</sup>	45	22	119	167
Total net servicing income	85	67	222	316
Total Consumer Banking mortgage banking income	297	290	754	1,117
Other mortgage banking income				
Other production income <sup>(3)</sup>	4	34	112	58
Representations and warranties provision	(102 )	(77 )	(168 )	37
Net servicing income				
Servicing fees	106	109	343	415
Amortization of expected cash flows <sup>(1)</sup>	(18 )	(20 )	(55 )	(58 )
Fair value changes of MSRs, net of risk management activities used to hedge certain market risks <sup>(2)</sup>	363	62	478	359
Total net servicing income	451	151	766	716
Eliminations <sup>(4)</sup>	(61 )	9	(130 )	174
Total other mortgage banking income	292	117	580	985
Total consolidated mortgage banking income	\$589	\$407	\$1,334	\$2,102

<sup>(1)</sup> Represents the net change in fair value of the MSR asset due to the recognition of modeled cash flows.

Includes changes in fair value of MSRs due to changes in inputs and assumptions, net of risk management

<sup>(2)</sup> activities, and gains (losses) on sales of MSRs. For additional information see Note 17 – Mortgage Servicing Rights to the Consolidated Financial Statements.

<sup>(3)</sup> Consists primarily of revenue from sales of repurchased loans that had returned to performing status.

Includes the effect of transfers of mortgage loans from Consumer Banking to the asset and liability management (4) (ALM) portfolio included in All Other and net gains or losses on intercompany trades related to MSR risk management.

Total production income for Consumer Banking for the three and nine months ended September 30, 2016 decreased \$11 million to \$212 million, and \$269 million to \$532 million compared to the same periods in 2015 due to a decrease in production volume to be sold, resulting from a decision to retain certain residential mortgage loans in Consumer Banking.

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## Servicing

The costs associated with servicing activities related to the residential mortgage and home equity loan portfolios, including owned loans and loans serviced for others (collectively, the mortgage serviced portfolio) are allocated to the business segment that owns the loans or MSRs, or All Other.

Servicing activities include collecting cash for principal, interest and escrow payments from borrowers, disbursing customer draws for lines of credit, accounting for and remitting principal and interest payments to investors and escrow payments to third parties, and responding to customer inquiries. Our home retention efforts, including single point of contact resources, are also part of our servicing activities, along with supervision of foreclosures and property dispositions. Prior to foreclosure, we evaluate various workout options in an effort to help our customers avoid foreclosure.

Consumer Banking servicing income for the three months ended September 30, 2016 increased \$18 million to \$85 million due to improved MSR results, net of the related hedge performance, partially offset by lower servicing fees due to a smaller servicing portfolio. Servicing income for the nine months ended September 30, 2016 decreased \$94 million to \$222 million compared to the same period in 2015 driven by lower servicing fees due to a smaller servicing portfolio, partially offset by improved MSR results, net of the related hedge performance. Servicing fees for the three and nine months ended September 30, 2016 declined 12 percent to \$179 million and 17 percent to \$542 million compared to the same periods in 2015 reflecting the decline in the size of the servicing portfolio.

## Mortgage Servicing Rights

At September 30, 2016, the core MSR portfolio, held within Consumer Lending, was \$1.8 billion compared to \$2.3 billion at September 30, 2015. The decrease was primarily driven by the amortization of expected cash flows, which exceeded new additions, as well as changes in fair value due to changes in inputs and assumptions. For more information on MSRs, see Note 17 – Mortgage Servicing Rights to the Consolidated Financial Statements.

## Key Statistics – Mortgage Banking Income

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Loan production <sup>(1)</sup> :				
Total <sup>(2)</sup> :				
First mortgage	\$16,865	\$13,712	\$45,802	\$43,386
Home equity	3,541	3,140	11,649	9,566
Consumer Banking:				
First mortgage	\$11,588	\$10,026	\$32,207	\$31,146
Home equity	3,139	2,840	10,535	8,797

(1) The loan production amounts represent the unpaid principal balance of loans and in the case of home equity, the principal amount of the total line of credit.

(2) In addition to loan production in Consumer Banking, there is also first mortgage and home equity loan production in GWIM.

First mortgage loan originations in Consumer Banking and for the total Corporation increased \$1.6 billion and \$3.2 billion for the three months ended September 30, 2016 compared to the same period in 2015 driven by higher refinance activity due to the low rate environment. First mortgage loan originations in Consumer Banking and for the total Corporation increased \$1.1 billion and \$2.4 billion for the nine months ended September 30, 2016 compared to

the same period in 2015 driven by higher purchase activity.

Home equity production for the total Corporation was \$3.5 billion and \$11.6 billion for the three and nine months ended September 30, 2016 compared to \$3.1 billion and \$9.6 billion for the same periods in 2015, with the increases due to a higher demand in the market based on improving housing trends, as well as improved financial center engagement with customers and more competitive pricing.

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## Global Wealth &amp; Investment Management

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Net interest income (FTE basis)	\$1,394	\$1,360	3 %	\$4,310	\$4,081	6 %
Noninterest income:						
Investment and brokerage services	2,584	2,682	(4 )	7,718	8,154	(5 )
All other income	401	411	(2 )	1,245	1,321	(6 )
Total noninterest income	2,985	3,093	(3 )	8,963	9,475	(5 )
Total revenue, net of interest expense (FTE basis)	4,379	4,453	(2 )	13,273	13,556	(2 )
Provision for credit losses	7	(2 )	n/m	46	36	28
Noninterest expense	3,257	3,470	(6 )	9,822	10,446	(6 )
Income before income taxes (FTE basis)	1,115	985	13	3,405	3,074	11
Income tax expense (FTE basis)	418	353	18	1,267	1,130	12
Net income	\$697	\$632	10	\$2,138	\$1,944	10
Net interest yield (FTE basis)	2.03	% 2.10	%	2.09	% 2.14	%
Return on average allocated capital	21	21		22	22	
Efficiency ratio (FTE basis)	74.36	77.92		74.00	77.06	

## Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Total loans and leases	\$143,207	\$134,319	7 %	\$141,169	\$130,975	8 %
Total earning assets	273,568	257,424	6	275,675	255,572	8
Total assets	288,821	274,272	5	291,383	272,790	7
Total deposits	253,812	243,980	4	256,356	242,507	6
Allocated capital	13,000	12,000	8	13,000	12,000	8

Period end	September 30		% Change
	2016	2015	
Total loans and leases	\$144,980	\$139,039	4 %
Total earning assets	274,289	279,597	(2 )
Total assets	289,795	296,271	(2 )
Total deposits	252,962	260,893	(3 )

n/m = not meaningful

GWIM consists of two primary businesses: Merrill Lynch Global Wealth Management (MLGWM) and U.S. Trust, Bank of America Private Wealth Management (U.S. Trust).

MLGWM's advisory business provides a high-touch client experience through a network of financial advisors focused on clients with over \$250,000 in total investable assets. MLGWM provides tailored solutions to meet our clients' needs through a full set of investment management, brokerage, banking and retirement products.

U.S. Trust, together with MLGWM's Private Banking & Investments Group, provides comprehensive wealth management solutions targeted to high net worth and ultra high net worth clients, as well as customized solutions to meet clients' wealth structuring, investment management, trust and banking needs, including specialty asset management services.

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Client assets managed under advisory and/or discretion of GWIM are AUM and are typically held in diversified portfolios. The majority of client AUM have an investment strategy with a duration of greater than one year and are, therefore, considered long-term AUM. Fees earned on long-term AUM are calculated as a percentage of total AUM. The asset management fees charged to clients per year are dependent on various factors, but are generally driven by the breadth of the client's relationship and generally range from 50 to 150 bps on their total AUM. The net client long-term AUM flows represent the net change in clients' long-term AUM balances over a specified period of time, excluding market appreciation/depreciation and other adjustments.

Client assets under advisory and/or discretion of GWIM in which the investment strategy seeks current income, while maintaining liquidity and capital preservation, are considered liquidity AUM. The duration of these strategies is primarily less than one year. The change in AUM balances from the prior-year periods is primarily the net client flows for liquidity AUM.

Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for GWIM increased \$65 million to \$697 million driven by a decrease in noninterest expense, partially offset by a decrease in revenue. Net interest income of \$1.4 billion remained relatively unchanged. Noninterest income, which primarily includes investment and brokerage services income, decreased \$108 million to \$3.0 billion driven by lower transactional revenue. Noninterest expense decreased \$213 million to \$3.3 billion primarily due to the expiration of certain advisor retention awards and lower operating and support costs, partially offset by higher FDIC expense.

Return on average allocated capital remained unchanged at 21 percent. For more information on capital allocated to the business segments, see Business Segment Operations on page 17.

Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net income for GWIM increased \$194 million to \$2.1 billion driven by a decrease in noninterest expense, partially offset by a decrease in revenue. Net interest income increased \$229 million to \$4.3 billion driven by the impact of growth in deposit and loan balances. Noninterest income, which primarily includes investment and brokerage services income, decreased \$512 million to \$9.0 billion driven by the impact of lower market valuations and lower transactional revenue, partially offset by the impact of long-term AUM flows. Noninterest expense decreased \$624 million to \$9.8 billion driven by the same factors as described in the three-month discussion above.

Return on average allocated capital remained unchanged at 22 percent.



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## Key Indicators and Metrics

	Three Months Ended		Nine Months Ended	
	September 30		September 30	
(Dollars in millions, except as noted)	2016	2015	2016	2015
<b>Revenue by Business</b>				
Merrill Lynch Global Wealth Management	\$3,617	\$3,683	\$10,886	\$11,235
U.S. Trust	761	752	2,300	2,268
Other <sup>(1)</sup>	1	18	87	53
Total revenue, net of interest expense (FTE basis)	\$4,379	\$4,453	\$13,273	\$13,556
<b>Client Balances by Business, at period end</b>				
Merrill Lynch Global Wealth Management			\$2,089,683	\$1,943,798
U.S. Trust			400,538	375,751
Other <sup>(1)</sup>			—	78,110
Total client balances			\$2,490,221	\$2,397,659
<b>Client Balances by Type, at period end</b>				
Long-term assets under management			\$871,026	\$798,887
Liquidity assets under management <sup>(1)</sup>			—	78,106
Assets under management			871,026	876,993
Brokerage assets			1,095,635	1,026,355
Assets in custody			122,804	109,196
Deposits			252,962	246,172
Loans and leases <sup>(2)</sup>			147,794	138,943
Total client balances			\$2,490,221	\$2,397,659
<b>Assets Under Management Rollforward</b>				
Assets under management, beginning balance	\$832,394	\$930,360	\$900,863	\$902,872
Net long-term client flows	10,182	4,448	19,638	27,695
Net liquidity client flows	—	(3,210 )	(7,990 )	1,320
Market valuation/other <sup>(1)</sup>	28,450	(54,605 )	(41,485 )	(54,894 )
Total assets under management, ending balance	\$871,026	\$876,993	\$871,026	\$876,993
<b>Associates, at period end <sup>(3, 4)</sup></b>				
Number of financial advisors			16,731	16,522
Total wealth advisors, including financial advisors			18,248	17,967
Total client-facing professionals, including financial advisors and wealth advisors			20,683	20,446
<b>Merrill Lynch Global Wealth Management Metric <sup>(4)</sup></b>				
Financial advisor productivity <sup>(5)</sup> (in thousands)	\$983	\$1,007	\$984	\$1,033
<b>U.S. Trust Metric, at period end <sup>(4)</sup></b>				
Client-facing professionals			2,223	2,182

Includes the results of BofA Global Capital Management, the cash management division of Bank of America, and <sup>(1)</sup> certain administrative items. Also includes the transfer of approximately \$80 billion of BofA Global Capital Management's AUM during the three months ended June 30, 2016.

<sup>(2)</sup> Includes margin receivables which are classified in customer and other receivables on the Consolidated Balance Sheet.

- (3) Includes financial advisors in the Consumer Banking segment of 2,179 and 2,050 at September 30, 2016 and 2015.
- (4) Headcount computation is based upon full-time equivalents.  
Financial advisor productivity is defined as annualized MLGWM total revenue, excluding the allocation of certain
- (5) ALM activities, divided by the total number of financial advisors (excluding financial advisors in the Consumer Banking segment).

Client balances increased \$92.6 billion, or four percent, from a year ago to nearly \$2.5 trillion primarily driven by higher market valuations and net inflows, partially offset by the impact of the transfer of approximately \$80 billion of BofA Global Capital Management's AUM. The number of wealth advisors increased two percent, due to continued investment in the advisor development programs, competitive recruiting and near historic low levels of advisor attrition.

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## Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Revenue from MLGWM decreased \$66 million to \$3.6 billion driven by a decline in noninterest income, partially offset by an increase in net interest income. Noninterest income decreased driven by lower transactional revenue. Net interest income increased driven by the impact of growth in deposit and loan balances.

Revenue from U.S. Trust increased \$9 million to \$761 million driven by an increase in net interest income, partially offset by a decrease in noninterest income.

## Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Revenue from MLGWM decreased \$349 million to \$10.9 billion driven by a decline in noninterest income, partially offset by an increase in net interest income. Noninterest income decreased driven by lower market valuations and lower transactional revenue, partially offset by the impact of long-term AUM flows. Net interest income increased driven by the impact of growth in deposit and loan balances.

Revenue from U.S. Trust increased \$32 million to \$2.3 billion driven by an increase in net interest income primarily driven by the impact of growth in loan balances, partially offset by a decrease in noninterest income driven by lower market valuations, partially offset by the impact of long-term AUM flows.

## Net Migration Summary

GWIM results are impacted by the net migration of clients and their corresponding deposit, loan and brokerage balances primarily to or from Consumer Banking, as presented in the table below. Migrations result from the movement of clients between business segments to better align with client needs.

Net Migration Summary <sup>(1)</sup>

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Total deposits, net – to (from) GWIM	\$17	\$697	\$(1,040)	\$169
Total loans, net – to (from) GWIM	(15)	(15)	—	(69)
Total brokerage, net – to (from) GWIM	(264)	(446)	(830)	(1,703)

<sup>(1)</sup> Migration occurs primarily between GWIM and Consumer Banking.

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Banking

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Net interest income (FTE basis)	\$2,470	\$2,315	7 %	\$7,439	\$6,788	10 %
Noninterest income:						
Service charges	780	746	5	2,284	2,184	5
Investment banking fees	795	752	6	2,230	2,381	(6 )
All other income	703	523	34	1,943	1,707	14
Total noninterest income	2,278	2,021	13	6,457	6,272	3
Total revenue, net of interest expense (FTE basis)	4,748	4,336	10	13,896	13,060	6
Provision for credit losses	118	181	(35 )	870	454	92
Noninterest expense	2,151	2,161	<(1)	6,449	6,396	1
Income before income taxes (FTE basis)	2,479	1,994	24	6,577	6,210	6
Income tax expense (FTE basis)	926	716	29	2,435	2,286	7
Net income	\$1,553	\$1,278	22	\$4,142	\$3,924	6
Net interest yield (FTE basis)	2.83	% 2.87	%	2.88	% 2.89	%
Return on average allocated capital	17	14		15	15	
Efficiency ratio (FTE basis)	45.30	49.86		46.41	48.97	

## Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Total loans and leases	\$334,363	\$308,710	8 %	\$332,474	\$298,923	11 %
Total earning assets	347,462	320,307	8	345,406	314,580	10
Total assets	395,423	370,246	7	394,402	364,659	8
Total deposits	306,198	296,321	3	300,732	290,327	4
Allocated capital	37,000	35,000	6	37,000	35,000	6

Period end	September 30		% Change
	2016	December 31 2015	
Total loans and leases	\$334,120	\$323,687	3 %
Total earning assets	349,993	334,766	5
Total assets	397,795	386,132	3
Total deposits	301,061	296,162	2

Global Banking, which includes Global Corporate Banking, Global Commercial Banking, Business Banking and Global Investment Banking, provides a wide range of lending-related products and services, integrated working capital management and treasury solutions to clients, and underwriting and advisory services through our network of offices and client relationship teams. Our lending products and services include commercial loans, leases, commitment facilities, trade finance, real estate lending and asset-based lending. Our treasury solutions business includes treasury management, foreign exchange and short-term investing options. We also provide investment

banking products to our clients such as debt and equity underwriting and distribution, and merger-related and other advisory services. Underwriting debt and equity issuances, fixed-income and equity research, and certain market-based activities are executed through our global broker-dealer affiliates which are our primary dealers in several countries. Within Global Banking, Global Commercial Banking clients generally include middle-market companies, commercial real estate firms and not-for-profit companies. Global Corporate Banking clients generally include large global corporations, financial institutions and leasing clients. Business Banking clients include mid-sized U.S.-based businesses requiring customized and integrated financial advice and solutions.

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Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for Global Banking increased \$275 million to \$1.6 billion primarily driven by higher revenue and lower provision for credit losses.

Revenue increased \$412 million to \$4.7 billion due to higher net interest income and noninterest income. Net interest income increased \$155 million to \$2.5 billion driven by the impact of growth in loans and leases. Noninterest income increased \$257 million to \$2.3 billion primarily due to the impact from loans and related loan hedging activities in the fair value option portfolio, as well as higher investment banking fees and treasury-related revenues.

The provision for credit losses decreased \$63 million to \$118 million driven by a slower pace of loan growth. Noninterest expense remained relatively unchanged at \$2.2 billion as lower operating and support costs were largely offset by higher revenue-related incentive compensation and FDIC expense.

The return on average allocated capital was 17 percent, up from 14 percent, due to higher net income, partially offset by increased capital allocations. For more information on capital allocated to the business segments, see Business Segment Operations on page 17.

Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net income for Global Banking of \$4.1 billion increased \$218 million as higher revenue more than offset increases in the provision for credit losses and noninterest expense.

Revenue increased \$836 million to \$13.9 billion driven by higher net interest income, which increased \$651 million to \$7.4 billion driven by the same factors as described in the three-month discussion above. Noninterest income increased \$185 million to \$6.5 billion primarily due to the impact from loans and the related loan hedging activities in the fair value option portfolio, as well as higher treasury-related revenues and card income, partially offset by lower investment banking fees.

The provision for credit losses increased \$416 million to \$870 million driven by increases in energy-related reserves. For more information on our energy exposure, see Commercial Portfolio Credit Risk Management – Industry Concentrations on page 74. Noninterest expense increased \$53 million to \$6.4 billion as investments in client-facing professionals in Commercial and Business Banking, higher severance costs and an increase in FDIC expense were largely offset by lower support costs and incentive compensation.

Return on average allocated capital remained unchanged at 15 percent.

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## Global Corporate, Global Commercial and Business Banking

Global Corporate, Global Commercial and Business Banking each include Business Lending and Global Transaction Services activities. Business Lending includes various lending-related products and services, and related hedging activities, including commercial loans, leases, commitment facilities, trade finance, real estate lending and asset-based lending. Global Transaction Services includes deposits, treasury management, credit card, foreign exchange and short-term investment products. The table below presents a summary of the results, which exclude certain investment banking activities in Global Banking.

## Global Corporate, Global Commercial and Business Banking

(Dollars in millions)	Three Months Ended September 30							
	Global Corporate Banking		Global Commercial Banking		Business Banking		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
Revenue								
Business Lending	\$1,113	\$983	\$1,069	\$978	\$91	\$91	\$2,273	\$2,052
Global Transaction Services	741	705	671	668	182	179	1,594	1,552
Total revenue, net of interest expense	\$1,854	\$1,688	\$1,740	\$1,646	\$273	\$270	\$3,867	\$3,604
Balance Sheet								
Average								
Total loans and leases	\$153,249	\$141,311	\$163,483	\$150,000	\$17,621	\$17,166	\$334,353	\$308,477
Total deposits	143,604	138,019	127,161	123,840	35,433	34,468	306,198	296,327
	Nine Months Ended September 30							
	2016	2015	2016	2015	2016	2015	2016	2015
Revenue								
Business Lending	\$3,269	\$2,925	\$3,129	\$2,891	\$280	\$269	\$6,678	\$6,085
Global Transaction Services	2,171	2,063	2,036	1,955	549	515	4,756	4,533
Total revenue, net of interest expense	\$5,440	\$4,988	\$5,165	\$4,846	\$829	\$784	\$11,434	\$10,618
Balance Sheet								
Average								
Total loans and leases	\$152,772	\$135,732	\$162,235	\$146,037	\$17,438	\$17,055	\$332,445	\$298,824
Total deposits	140,373	136,271	125,676	121,083	34,685	32,977	300,734	290,331
Period end								
Total loans and leases	\$151,825	\$142,954	\$164,563	\$153,310	\$17,716	\$17,298	\$334,104	\$313,562
Total deposits	140,401	139,259	124,995	123,562	35,656	34,827	301,052	297,648

Business Lending revenue increased \$221 million and \$593 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015 driven by the impact of growth in loans and leases, as well as the impact from loans and the related loan hedging activities in the fair value option portfolio.

Global Transaction Services revenue increased \$42 million and \$223 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015 primarily due to higher net interest income driven by the beneficial impact of an increase in investable assets as a result of higher deposits, and growth in treasury-related

revenues.

Average loans and leases increased eight percent and 11 percent for the three and nine months ended September 30, 2016 compared to the same periods in 2015 driven by growth in the commercial and industrial, and leasing portfolios. Average deposits increased three percent and four percent for the three and nine months ended September 30, 2016 compared to the same periods in 2015 due to continued portfolio growth with new and existing clients.

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## Global Investment Banking

Client teams and product specialists underwrite and distribute debt, equity and loan products, and provide advisory services and tailored risk management solutions. The economics of certain investment banking and underwriting activities are shared primarily between Global Banking and Global Markets under an internal revenue-sharing arrangement. To provide a complete discussion of our consolidated investment banking fees, the following table presents total Corporation investment banking fees and the portion attributable to Global Banking.

## Investment Banking Fees

(Dollars in millions)	Three Months Ended September 30				Nine Months Ended September 30			
	Global Banking		Total Corporation		Global Banking		Total Corporation	
	2016	2015	2016	2015	2016	2015	2016	2015
Products								
Advisory	\$295	\$365	\$328	\$391	\$913	\$999	\$1,007	\$1,095
Debt issuance	405	325	908	748	1,060	1,031	2,466	2,416
Equity issuance	95	62	261	188	257	351	681	950
Gross investment banking fees	795	752	1,497	1,327	2,230	2,381	4,154	4,461
Self-led deals	(10 )	(11 )	(39 )	(40 )	(36 )	(50 )	(135 )	(161 )
Total investment banking fees	\$785	\$741	\$1,458	\$1,287	\$2,194	\$2,331	\$4,019	\$4,300

Total Corporation investment banking fees of \$1.5 billion, excluding self-led deals, for the three months ended September 30, 2016 primarily included within Global Banking and Global Markets, increased 13 percent compared to the same period in 2015 driven by higher debt and equity issuance fees, partially offset by lower advisory fees. Total Corporation investment banking fees of \$4.0 billion, excluding self-led deals, for the nine months ended September 30, 2016 decreased seven percent compared to the same period in 2015 driven by lower equity issuance fees and advisory fees due to a decline in market fee pools.

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## Global Markets

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Net interest income (FTE basis)	\$ 1,119	\$ 1,094	2 %	\$ 3,391	\$ 3,059	11 %
Noninterest income:						
Investment and brokerage services	490	574	(15 )	1,583	1,703	(7 )
Investment banking fees	645	521	24	1,742	1,869	(7 )
Trading account profits	1,934	1,471	31	5,401	5,312	2
All other income (loss)	171	90	90	501	(47 )	n/m
Total noninterest income	3,240	2,656	22	9,227	8,837	4
Total revenue, net of interest expense (FTE basis)	4,359	3,750	16	12,618	11,896	6
Provision for credit losses	19	42	(55 )	23	69	(67 )
Noninterest expense	2,658	2,697	(1 )	7,690	8,606	(11 )
Income before income taxes (FTE basis)	1,682	1,011	66	4,905	3,221	52
Income tax expense (FTE basis)	608	211	188	1,746	968	80
Net income	\$ 1,074	\$ 800	34	\$ 3,159	\$ 2,253	40
Return on average allocated capital	12	% 9	%	11	% 9	%
Efficiency ratio (FTE basis)	60.94	71.93		60.94	72.34	

## Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Trading-related assets:						
Trading account securities	\$ 185,785	\$ 196,685	(6 )%	\$ 183,928	\$ 195,775	(6 )%
Reverse repurchases	89,435	103,312	(13 )	89,218	109,219	(18 )
Securities borrowed	87,872	75,786	16	86,159	78,520	10
Derivative assets	52,325	55,389	(6 )	52,164	55,489	(6 )
Total trading-related assets <sup>(1)</sup>	415,417	431,172	(4 )	411,469	439,003	(6 )
Total loans and leases	69,043	66,349	4	69,315	61,625	12
Total earning assets <sup>(1)</sup>	422,636	436,809	(3 )	421,221	434,004	(3 )
Total assets	584,069	594,142	(2 )	582,006	596,568	(2 )
Total deposits	32,840	36,818	(11 )	34,409	38,376	(10 )
Allocated capital	37,000	35,000	6	37,000	35,000	6

Period end	September 30	December 31	% Change
Total trading-related assets <sup>(1)</sup>	\$ 417,517	\$ 373,926	12 %
Total loans and leases	72,144	73,208	(1 )
Total earning assets <sup>(1)</sup>	435,112	384,046	13
Total assets	595,165	548,790	8
Total deposits	31,692	37,038	(14 )

<sup>(1)</sup> Trading-related assets include derivative assets, which are considered non-earning assets.

n/m = not meaningful

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Global Markets offers sales and trading services, including research, to institutional clients across fixed-income, credit, currency, commodity and equity businesses. Global Markets product coverage includes securities and derivative products in both the primary and secondary markets. Global Markets provides market-making, financing, securities clearing, settlement and custody services globally to our institutional investor clients in support of their investing and trading activities. We also work with our commercial and corporate clients to provide risk management products using interest rate, equity, credit, currency and commodity derivatives, foreign exchange, fixed-income and mortgage-related products. As a result of our market-making activities in these products, we may be required to manage risk in a broad range of financial products including government securities, equity and equity-linked securities, high-grade and high-yield corporate debt securities, syndicated loans, mortgage-backed securities (MBS), commodities and asset-backed securities (ABS). The economics of certain investment banking and underwriting activities are shared primarily between Global Markets and Global Banking under an internal revenue-sharing arrangement. Global Banking originates certain deal-related transactions with our corporate and commercial clients that are executed and distributed by Global Markets. For more information on investment banking fees on a consolidated basis, see page 32.

Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for Global Markets increased \$274 million to \$1.1 billion. Net DVA losses were \$127 million compared to gains of \$12 million. Excluding net DVA, net income increased \$360 million to \$1.2 billion primarily driven by higher sales and trading revenue, increased investment banking income and lower noninterest expense. Sales and trading revenue, excluding net DVA, increased \$581 million primarily driven by stronger performance globally across credit products led by mortgages, and continued strength in rates products. Noninterest expense decreased \$39 million to \$2.7 billion primarily due to lower operating and support costs, partially offset by higher revenue-related compensation.

Average earning assets decreased \$14.2 billion to \$422.6 billion primarily driven by a decrease in trading inventory and match book financing activity, partially offset by higher loans and other customer financing.

The return on average allocated capital was 12 percent, up from nine percent, reflecting an increase in net income, partially offset by an increase in allocated capital. For more information on capital allocated to the business segments, see Business Segment Operations on page 17.

Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net income for Global Markets increased \$906 million to \$3.2 billion. Net DVA losses were \$137 million compared to losses of \$588 million. Excluding net DVA, net income increased \$626 million to \$3.2 billion primarily driven by higher sales and trading revenue and lower noninterest expense, partially offset by lower investment banking fees. Sales and trading revenue, excluding net DVA, increased \$359 million primarily due to a stronger performance globally across credit products led by mortgages and continued strength in rates products, partially offset by challenging credit market conditions in early 2016 as well as reduced client activity in equities, most notably in Asia, and in derivatives. Noninterest expense decreased \$916 million to \$7.7 billion primarily due to lower litigation expense and lower revenue-related expenses.

Average earning assets decreased \$12.8 billion to \$421.2 billion primarily driven by a decrease in match book financing activity and a reduction in trading inventory, partially offset by higher loans and other customer financing. Period-end trading-related assets increased \$43.6 billion from December 31, 2015 primarily driven by higher securities borrowed or purchased under agreements to resell due to increased customer financing activity.

The return on average allocated capital was 11 percent, up from nine percent, reflecting an increase in net income, partially offset by an increase in allocated capital.

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## Sales and Trading Revenue

Sales and trading revenue includes unrealized and realized gains and losses on trading and other assets, net interest income, and fees primarily from commissions on equity securities. Sales and trading revenue is segregated into fixed-income (government debt obligations, investment and non-investment grade corporate debt obligations, commercial MBS, residential mortgage-backed securities (RMBS), collateralized loan obligations (CLOs), interest rate and credit derivative contracts), currencies (interest rate and foreign exchange contracts), commodities (primarily futures, forwards, swaps and options) and equities (equity-linked derivatives and cash equity activity). The table below and related discussion present sales and trading revenue, substantially all of which is in Global Markets, with the remainder in Global Banking. In addition, the table below and related discussion present sales and trading revenue excluding the impact of net DVA, which is a non-GAAP financial measure. We believe the use of this non-GAAP financial measure provides additional useful information to assess the underlying performance of these businesses and to allow better comparison of period-to-period operating performance.

Sales and Trading Revenue <sup>(1, 2)</sup>

	Three Months		Nine Months	
	Ended	Ended	Ended	Ended
	September 30	September 30	September 30	September 30
(Dollars in millions)	2016	2015	2016	2015
Sales and trading revenue				
Fixed-income, currencies and commodities	\$2,646	\$2,010	\$7,507	\$6,307
Equities	954	1,148	3,072	3,462
Total sales and trading revenue	\$3,600	\$3,158	\$10,579	\$9,769

Sales and trading revenue, excluding net DVA <sup>(3)</sup>

Fixed-income, currencies and commodities	\$2,767	\$1,992	\$7,647	\$6,881
Equities	960	1,154	3,069	3,476
Total sales and trading revenue, excluding net DVA <sup>(3)</sup>	\$3,727	\$3,146	\$10,716	\$10,357

Includes FTE adjustments of \$47 million and \$135 million for the three and nine months ended September 30,

(1) 2016 compared to \$46 million and \$141 million for the same periods in 2015. For more information on sales and trading revenue, see Note 2 – Derivatives to the Consolidated Financial Statements.

(2) Includes Global Banking sales and trading revenue of \$56 million and \$336 million for the three and nine months ended September 30, 2016 compared to \$86 million and \$295 million for the same periods in 2015.

Fixed-income, currencies and commodities (FICC) and Equities sales and trading revenue, excluding net DVA, is a

(3) non-GAAP financial measure. FICC net DVA losses were \$121 million and \$140 million for the three and nine months ended September 30, 2016 compared to net DVA gains of \$18 million and losses of \$574 million for the same periods in 2015. Equities net DVA losses were \$6 million and gains were \$3 million for the three and nine months ended September 30, 2016 compared to net DVA losses of \$6 million and \$14 million for the same periods in 2015.

The explanations for period-over-period changes in sales and trading, FICC and Equities revenue, as set forth below, are the same whether or not net DVA is included.

## Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

FICC revenue, excluding net DVA, increased \$775 million to \$2.8 billion, due to stronger performance globally across credit products, particularly in mortgages due to strong asset demand as investors sought yield. The credit market environment improved with spreads tightening and rising high-yield and bank loan prices supported by strong inflows to credit related funds. In addition, we saw continued strength in rates products and client financing due to

increased customer activity, while currencies and commodities were down reflecting weaker client demand. Equities revenue, excluding net DVA, decreased \$194 million to \$1.0 billion due to lower levels of client activity in derivatives compared with a strong year-ago period, which benefited from higher levels of market volatility, and lower client volumes in swaps and cash secondary.

Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

FICC revenue, excluding net DVA, increased \$766 million as rates products improved on increased customer flow, and mortgages recorded strong results particularly during the three months ended September 30, 2016. This was partially offset by weaker performance in G10 currencies, which benefited from a particularly favorable trading environment in the first half of 2015, as well as commodities, where lower volatility dampened client activity. Equities revenue, excluding net DVA, decreased \$407 million to \$3.1 billion primarily driven by lower levels of client activity in Asia which benefited from increased market volumes relating to stock markets rallies in the region in 2015, as well as weaker trading performance in derivatives.

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## All Other

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Net interest income (FTE basis)	\$156	\$265	(41 )%	\$505	\$ 809	(38 )%
Noninterest income:						
Card income	46	68	(32 )	145	201	(28 )
Mortgage banking income	291	115	153	577	978	(41 )
Gains on sales of debt securities	51	436	(88 )	490	875	(44 )
All other loss	(135 )	(185 )	(27 )	(747 )	(841 )	(11 )
Total noninterest income	253	434	(42 )	465	1,213	(62 )
Total revenue, net of interest expense (FTE basis)	409	699	(41 )	970	2,022	(52 )
Provision for credit losses	8	62	(87 )	(71 )	130	n/m
Noninterest expense	1,044	900	16	4,505	4,197	7
Loss before income taxes (FTE basis)	(643 )	(263 )	144	(3,464 )	(2,305 )	50
Income tax benefit (FTE basis)	(461 )	(415 )	11	(1,982 )	(1,823 )	9
Net income (loss)	\$(182 )	\$152	n/m	\$(1,482 )	\$ (482 )	n/m

## Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2016	2015	% Change	2016	2015	% Change
Total loans and leases	\$105,298	\$134,948	(22 )%	\$111,611	\$ 150,708	(26 )%
Total assets <sup>(1)</sup>	246,541	306,946	(20 )	253,981	302,777	(16 )
Total deposits	28,628	26,125	10	28,028	25,263	11

Period end	September 30		% Change
	2016	2015	
Total loans and leases	\$102,639	\$ 122,198	(16 )%
Total assets <sup>(1)</sup>	225,312	267,667	(16 )
Total deposits	29,150	25,334	15

In segments where the total of liabilities and equity exceeds assets, which are generally deposit-taking segments, we allocate assets from All Other to those segments to match liabilities (i.e., deposits) and allocated shareholders' <sup>(1)</sup> equity. Such allocated assets were \$500.4 billion and \$497.8 billion for the three and nine months ended September 30, 2016 compared to \$458.5 billion and \$459.8 billion for the same periods in 2015, and \$508.5 billion and \$489.0 billion at September 30, 2016 and December 31, 2015.

n/m = not meaningful

All Other consists of ALM activities, equity investments, the international consumer card business, non-core mortgage loans and servicing activities, the net impact of periodic revisions to the MSR valuation model for both core and non-core MSRs, liquidating businesses, residual expense allocations and other. ALM activities encompass certain residential mortgages, debt securities, interest rate and foreign currency risk management activities, the impact of certain allocation methodologies and accounting hedge ineffectiveness. The results of certain ALM activities are allocated to our business segments. For more information on our ALM activities, see Note 18 – Business Segment Information to the Consolidated Financial Statements. Equity investments include our merchant services joint venture as well as Global Principal Investments (GPI) which is comprised of a portfolio of equity, real estate and other



alternative investments. For more information on our merchant services joint venture, see Note 10 – Commitments and Contingencies to the Consolidated Financial Statements.

The Corporation classifies consumer real estate loans as core or non-core based on loan and customer characteristics such as origination date, product type, LTV, FICO score and delinquency status. Residential mortgage loans that are held for interest rate or liquidity risk management purposes are presented on the balance sheet of All Other. For more information on our interest rate and liquidity risk management activities, see Liquidity Risk on page 47 and Interest Rate Risk Management for the Banking Book on page 89. During the nine months ended September 30, 2016, residential mortgage loans held for ALM activities decreased \$6.9 billion to \$36.3 billion at September 30, 2016 primarily as a result of payoffs and paydowns as well as loan sales. Non-core residential mortgage and home equity loans, which are principally run-off portfolios, including certain loans accounted for under the fair value option and MSRMs pertaining to

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non-core loans serviced for others, are also held in All Other. During the nine months ended September 30, 2016, total non-core loans decreased \$11.8 billion to \$57.0 billion at September 30, 2016 due largely to payoffs and paydowns, as well as loan sales.

### Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net income for All Other decreased \$334 million to a net loss of \$182 million due to lower net interest income, lower gains on sales of consumer real estate loans, lower gains on sales of debt securities and an increase in noninterest expense, partially offset by favorable MSR results, net of the related hedge performance, which includes a net \$282 million increase in MSR fair value due to a revision of certain MSR valuation assumptions and a decrease in the provision for credit losses. Gains on the sales of loans, including nonperforming and other delinquent loans, net of hedges, were \$36 million compared to gains of \$358 million in the prior-year period. For more information on MSR valuation assumptions, see Note 17 – Mortgage Servicing Rights to the Consolidated Financial Statements.

The provision for credit losses decreased \$54 million to \$8 million primarily driven by lower loan and lease balances from continued run-off of non-core mortgages. Noninterest expense increased \$144 million to \$1.0 billion driven by litigation expense. The income tax benefit was \$461 million compared to a benefit of \$415 million.

Included in the three months ended September 30, 2016 was a \$350 million tax charge related to the change in the U.K. corporate tax rate. In addition, both periods included income tax benefit adjustments to eliminate the FTE treatment of certain tax credits recorded in Global Banking.

### Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

The net loss for All Other increased \$1.0 billion to \$1.5 billion due to lower net interest income, lower mortgage banking income, lower gains on sales of consumer real estate loans and an increase in noninterest expense, partially offset by an improvement in the provision for credit losses. Gains on the sales of loans, including nonperforming and other delinquent loans, net of hedges, were \$214 million compared to gains of \$934 million in the prior-year period.

The provision for credit losses improved \$201 million to a benefit of \$71 million primarily driven by the same factors as described in the three-month discussion above.

Noninterest expense increased \$308 million to \$4.5 billion driven by the same factors as described in the three-month discussion above. The income tax benefit was \$2.0 billion compared to a benefit of \$1.8 billion driven by the change in the pretax loss, partially offset by the \$350 million tax charge mentioned in the three-month discussion above. In addition, both periods included income tax benefit adjustments to eliminate the FTE treatment in noninterest income of certain tax credits recorded in Global Banking.

### Off-Balance Sheet Arrangements and Contractual Obligations

We have contractual obligations to make future payments on debt and lease agreements. Additionally, in the normal course of business, we enter into contractual arrangements whereby we commit to future purchases of products or services from unaffiliated parties. For more information on obligations and commitments, see Note 10 – Commitments and Contingencies to the Consolidated Financial Statements, Off-Balance Sheet Arrangements and Contractual Obligations in the MD&A of the Corporation's 2015 Annual Report on Form 10-K, as well as Note 11 – Long-term Debt and Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

### Representations and Warranties

We securitize first-lien residential mortgage loans generally in the form of RMBS guaranteed by the government-sponsored enterprises (GSEs), which include Freddie Mac (FHLMC) and Fannie Mae (FNMA), or by the Government National Mortgage Association (GNMA) in the case of Federal Housing Administration (FHA)-insured, U.S. Department of Veterans Affairs-guaranteed and Rural Housing Service-guaranteed mortgage loans, and sell pools of first-lien residential mortgage loans in the form of whole loans. In addition, in prior years, legacy companies and certain subsidiaries sold pools of first-lien residential mortgage loans and home equity loans as private-label securitizations or in the form of whole loans. In connection with these transactions, we or certain of our subsidiaries or legacy companies made various representations and warranties. Breaches of these representations and warranties have resulted in and may continue to result in the requirement to repurchase mortgage loans or to otherwise make whole or provide other remedies to investors, guarantors, insurers or other parties (collectively, repurchases).

We have vigorously contested any request for repurchase where we have concluded that a valid basis for repurchase does not exist and will continue to do so in the future. However, in an effort to resolve legacy mortgage-related issues, we have reached settlements,

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certain of which have been for significant amounts, in lieu of a loan-by-loan review process, including with the GSEs, four monoline insurers and Bank of New York Mellon (BNY Mellon), as trustee for certain securitization trusts.

For more information on accounting for and other information related to representations and warranties, repurchase claims and related exposures, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements, Off-balance Sheet Arrangements and Contractual Obligations in the MD&A of the Corporation's 2015 Annual Report on Form 10-K, Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K and Item 1A. Risk Factors of the Corporation's 2015 Annual Report on Form 10-K.

### Unresolved Repurchase Claims

Unresolved representations and warranties repurchase claims represent the notional amount of repurchase claims made by counterparties, typically the outstanding principal balance or the unpaid principal balance at the time of default. In the case of first-lien mortgages, the claim amount is often significantly greater than the expected loss amount due to the benefit of collateral and, in some cases, mortgage insurance (MI) or mortgage guarantee payments. Claims received from a counterparty remain outstanding until the underlying loan is repurchased, the claim is rescinded by the counterparty, we determine that the applicable statute of limitations has expired, or representations and warranties claims with respect to the applicable trust are settled, and fully and finally released. We do not include duplicate claims in the amounts disclosed.

At September 30, 2016, we had \$18.3 billion of unresolved repurchase claims, predominantly related to subprime and pay option first-lien loans, and home equity loans, compared to \$18.4 billion at December 31, 2015. The notional amount of unresolved repurchase claims at both September 30, 2016 and December 31, 2015 included \$3.5 billion of claims related to loans in specific private-label securitization groups or tranches where we own substantially all of the outstanding securities. At both September 30, 2016 and December 31, 2015, for loans originated from 2004 through 2008, the notional amount of unresolved repurchase claims submitted by private-label securitization trustees, whole-loan investors, including third-party securitization sponsors, and others was \$16.7 billion. At September 30, 2016 and December 31, 2015, the notional amount of unresolved repurchase claims submitted by the GSEs for loans originated prior to 2009 was \$8 million and \$14 million. During the nine months ended September 30, 2016, we continued to have limited loan-level representations and warranties repurchase claims experience with the monoline insurers due to bulk settlements in prior years and ongoing litigation with a single monoline insurer. For more information on unresolved repurchase claims, see Off-Balance Sheet Arrangements and Contractual Obligations – Unresolved Repurchase Claims in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

### Liability for Representations and Warranties and Corporate Guarantees

The liability for representations and warranties and corporate guarantees is included in accrued expenses and other liabilities on the Consolidated Balance Sheet and the related provision is included in mortgage banking income in the Consolidated Statement of Income. At September 30, 2016 and December 31, 2015, the liability for representations and warranties was \$2.8 billion and \$11.3 billion. The reduction in the liability was primarily the result of an \$8.5 billion cash payment in February 2016 to BNY Mellon as part of the settlement with BNY Mellon. For the three and nine months ended September 30, 2016, the representations and warranties provision was \$99 million and \$158 million compared to a provision of \$75 million and a benefit of \$46 million for the same periods in 2015.

Our liability for representations and warranties is necessarily dependent on, and limited by, a number of factors including for private-label securitizations, the implied repurchase experience based on the settlement with BNY Mellon, as well as certain other assumptions and judgmental factors. Where relevant, we also consider more recent experience, such as claim activity, notification of potential indemnification obligations, our experience with various

counterparties, the New York Court of Appeals' ACE Securities Corp. v. DB Structured Products, Inc. (ACE) decision, other recent court decisions related to the statute of limitations, and other facts and circumstances, such as bulk settlements, as we believe appropriate. Accordingly, future provisions associated with obligations under representations and warranties may be materially impacted if future experiences are different from historical experience or our understandings, interpretations or assumptions. For more information on the settlement with BNY Mellon, and the ACE decision and its impact on unresolved repurchase claims, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

#### Estimated Range of Possible Loss

We currently estimate that the range of possible loss for representations and warranties exposures could be up to \$2 billion over existing accruals at September 30, 2016. We treat claims that are time-barred as resolved and do not consider such claims in the estimated range of possible loss. The estimated range of possible loss reflects principally exposures related to loans in private-label securitization trusts. It represents a reasonably possible loss, but does not represent a probable loss, and is based on currently available information, significant judgment and a number of assumptions that are subject to change.

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For more information on the methodology used to estimate the representations and warranties liability, the corresponding estimated range of possible loss and the types of losses not considered in such estimates, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements and Item 1A. Risk Factors of the Corporation's 2015 Annual Report on Form 10-K and, for more information related to the sensitivity of the assumptions used to estimate our liability for representations and warranties, see Complex Accounting Estimates – Representations and Warranties Liability in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

### Other Mortgage-related Matters

We continue to be subject to additional mortgage-related litigation and disputes, as well as governmental and regulatory scrutiny and investigations, related to our past and current origination, servicing, transfer of servicing and servicing rights, servicing compliance obligations, foreclosure activities, indemnification obligations, and MI and captive reinsurance practices with mortgage insurers. The ongoing environment of additional regulation, increased regulatory compliance obligations, and enhanced regulatory enforcement, combined with ongoing uncertainty related to the continuing evolution of the regulatory environment, has resulted in increased operational and compliance costs and may limit our ability to continue providing certain products and services. For more information on management's estimate of the aggregate range of possible loss for certain litigation matters and on regulatory investigations, see Note 10 – Commitments and Contingencies to the Consolidated Financial Statements.

### Managing Risk

Risk is inherent in all our business activities. The seven key types of risk faced by the Corporation are strategic, credit, market, liquidity, compliance, operational and reputational risks. Sound risk management enables us to serve our customers and deliver for our shareholders. If not managed well, risks can result in financial loss, regulatory sanctions and penalties, and damage to our reputation, each of which may adversely impact our ability to execute our business strategies. The Corporation takes a comprehensive approach to risk management with a defined Risk Framework and an articulated Risk Appetite Statement which are approved annually by the Enterprise Risk Committee (ERC) and the Board.

Our Risk Framework is the foundation for comprehensive management of the risks facing the Corporation. The Risk Framework sets forth clear roles, responsibilities and accountability for the management of risk and provides a blueprint for how the Board, through delegation of authority to committees and executive officers, establishes risk appetite and associated limits for our activities.

Our Risk Appetite Statement is intended to ensure that the Corporation maintains an acceptable risk profile by providing a common framework and a comparable set of measures for senior management and the Board to clearly indicate the level of risk the Corporation is willing to accept. Risk appetite is set at least annually in conjunction with the strategic, capital and financial operating plans to align risk appetite with the Corporation's strategy and financial resources. Our line of business strategies and risk appetite are also similarly aligned.

For more information on our risk management activities, including our Risk Framework, and the key types of risk faced by the Corporation, see the Managing Risk through the Reputational Risk sections in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

### Capital Management

The Corporation manages its capital position to ensure capital is more than adequate to support its business activities and to maintain capital, risk and risk appetite commensurate with one another. Additionally, we seek to maintain

safety and soundness at all times, even under adverse scenarios, take advantage of organic growth opportunities, ensure obligations to creditors and counterparties are met, maintain ready access to financial markets, continue to serve as a credit intermediary, remain a source of strength for our subsidiaries, and satisfy current and future regulatory capital requirements. Capital management is integrated into our risk and governance processes, as capital is a key consideration in the development of our strategic plan, risk appetite and risk limits.

Effective July 1, 2016, we changed our accounting method for the amortization of premiums and accretion of discounts related to certain debt securities. Under the applicable bank regulatory rules, we are not required to and, accordingly, will not restate previously-filed capital metrics and ratios in connection with the change in accounting method related to certain debt securities. The cumulative impact of this change would have resulted in an insignificant pro forma change of the Corporation's capital metrics and ratios. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

The Corporation periodically reviews capital allocated to its businesses and allocates capital annually during the strategic and capital planning processes. For additional information, see Business Segment Operations on page 17.

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### CCAR and Capital Planning

The Federal Reserve requires BHCs to submit a capital plan and requests for capital actions on an annual basis, consistent with the rules governing the CCAR capital plan.

In April 2016, we submitted our 2016 CCAR capital plan and related supervisory stress tests. The 2016 CCAR capital plan included requests (i) to repurchase \$5.0 billion of common stock over four quarters beginning in the third quarter of 2016, (ii) to repurchase common stock to offset the dilution resulting from certain equity-based compensation awards and (iii) to increase the quarterly common stock dividend from \$0.05 per share to \$0.075 per share. On June 29, 2016, following the Federal Reserve's non-objection to our 2016 CCAR capital plan, the Board authorized the common stock repurchase beginning July 1, 2016. The common stock repurchase authorization includes both common stock and warrants.

During the three months ended September 30, 2016, pursuant to the Board's authorization, we repurchased \$1.4 billion of common stock, which includes common stock to offset equity-based compensation awards. The timing and amount of common stock repurchases will be subject to various factors, including the Corporation's capital position, liquidity, financial performance and alternative uses of capital, stock trading price, and general market conditions, and may be suspended at any time. The common stock repurchases may be effected through open market purchases or privately negotiated transactions, including repurchase plans that satisfy the conditions of Rule 10b5-1 of the Securities Exchange Act of 1934. As a "well-capitalized" BHC, we may notify the Federal Reserve of our intention to make additional capital distributions not to exceed one percent of Tier 1 capital and which were not contemplated in our capital plan, subject to the Federal Reserve's non-objection.

### Regulatory Capital

As a financial services holding company, we are subject to regulatory capital rules issued by U.S. banking regulators. On January 1, 2014, we became subject to Basel 3, which includes certain transition provisions through January 1, 2019. The Corporation and its primary affiliated banking entity, BANA, are Advanced approaches institutions under Basel 3.

Basel 3 updated the composition of capital and established a Common equity tier 1 capital ratio. Common equity tier 1 capital primarily includes common stock, retained earnings and accumulated OCI, net of certain deductions and adjustments primarily related to goodwill, deferred tax assets, intangibles, MSRs and defined benefit pension assets. Basel 3 revised minimum capital ratios and buffer requirements, added a supplementary leverage ratio (SLR), and addressed the adequately capitalized minimum requirements under the Prompt Corrective Action (PCA) framework. Basel 3 also established two methods of calculating risk-weighted assets, the Standardized approach and the Advanced approaches. As an Advanced approaches institution, we are required to report regulatory risk-based capital ratios and risk-weighted assets under both the Standardized and Advanced approaches. The approach that yields the lower ratio is used to assess capital adequacy including under the PCA framework.

On January 1, 2016, we became subject to a capital conservation buffer, a countercyclical capital buffer and a global systemically important bank (G-SIB) surcharge which will be phased in over a three-year period ending January 1, 2019. Once fully phased in, the Corporation's risk-based capital ratio requirements will include a capital conservation buffer greater than 2.5 percent, plus any applicable countercyclical capital buffer and G-SIB surcharge in order to avoid restrictions on capital distributions and discretionary bonus payments. The buffers and surcharge must be composed solely of Common equity tier 1 capital. Under the phase-in provisions, in 2016 we must maintain a capital conservation buffer greater than 0.625 percent plus a G-SIB surcharge of 0.75 percent. The countercyclical capital buffer is currently set at zero. We estimate that our fully phased-in G-SIB surcharge will be 3.0 percent. The G-SIB surcharge may differ from this estimate over time.



For additional information, see Capital Management in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

#### Capital Composition and Ratios

Under the applicable bank regulatory rules, we are not required to and, accordingly, did not restate previously-filed regulatory capital metrics and ratios in connection with the change in accounting method related to certain debt securities. Therefore, the December 31, 2015 amounts in Tables 13 through 16 are as originally reported. The cumulative impact of this change in accounting method would have resulted in an immaterial pro forma decrease in the Corporation's Common equity tier 1 capital of approximately one basis point at December 31, 2015. The September 30, 2016 amounts in those tables reflect the change in accounting method. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

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Table 13 presents Bank of America Corporation's transition and fully phased-in capital ratios and related information in accordance with Basel 3 Standardized and Advanced approaches as measured at September 30, 2016 and December 31, 2015. Fully phased-in estimates are non-GAAP financial measures that the Corporation considers to be useful measures in evaluating compliance with new regulatory capital requirements that are not yet effective. For reconciliations to GAAP financial measures, see Table 16. As of September 30, 2016 and December 31, 2015, the Corporation meets the definition of "well capitalized" under current regulatory requirements.

Table 13

Bank of America Corporation Regulatory Capital under Basel 3 <sup>(1, 2)</sup>

(Dollars in millions)	September 30, 2016			Fully Phased-in				
	Standardized Approach	Advanced Approaches	Regulatory Minimum <sup>(3, 4)</sup>	Standardized Approach	Advanced Approaches <sup>(5)</sup>	Regulatory Minimum <sup>(6)</sup>		
Risk-based capital metrics:								
Common equity tier 1 capital	\$ 169,925	\$ 169,925		\$ 165,875	\$ 165,875			
Tier 1 capital	191,435	191,435		190,734	190,734			
Total capital <sup>(7)</sup>	229,132	219,878		226,108	216,855			
Risk-weighted assets (in billions)	1,396	1,547		1,411	1,524			
Common equity tier 1 capital ratio	12.2	% 11.0	% 5.875	% 11.8	% 10.9	% 10.0	%	
Tier 1 capital ratio	13.7	12.4	7.375	13.5	12.5	11.5		
Total capital ratio	16.4	14.2	9.375	16.0	14.2	13.5		
Leverage-based metrics:								
Adjusted quarterly average assets (in billions) <sup>(8)</sup>	\$ 2,111	\$ 2,111		\$ 2,112	\$ 2,112			
Tier 1 leverage ratio	9.1	% 9.1	% 4.0	9.0	% 9.0	% 4.0		
SLR leverage exposure (in billions)					\$ 2,704			
SLR					7.1	% 5.0		
December 31, 2015								
Risk-based capital metrics:								
Common equity tier 1 capital	\$ 163,026	\$ 163,026		\$ 154,084	\$ 154,084			
Tier 1 capital	180,778	180,778		175,814	175,814			
Total capital <sup>(7)</sup>	220,676	210,912		211,167	201,403			
Risk-weighted assets (in billions)	1,403	1,602		1,427	1,575			
Common equity tier 1 capital ratio	11.6	% 10.2	% 4.5	% 10.8	% 9.8	% 10.0	%	
Tier 1 capital ratio	12.9	11.3	6.0	12.3	11.2	11.5		
Total capital ratio	15.7	13.2	8.0	14.8	12.8	13.5		
Leverage-based metrics:								
Adjusted quarterly average assets (in billions) <sup>(8)</sup>	\$ 2,103	\$ 2,103		\$ 2,102	\$ 2,102			
Tier 1 leverage ratio	8.6	% 8.6	% 4.0	8.4	% 8.4	% 4.0		
SLR leverage exposure (in billions)					\$ 2,727			
SLR					6.4	% 5.0		

(1)

As an Advanced approaches institution, we are required to report regulatory capital risk-weighted assets and ratios under both the Standardized and Advanced approaches. The approach that yields the lower ratio is to be used to assess capital adequacy, and was the Advanced approaches at September 30, 2016 and December 31, 2015.

(2) Under the applicable bank regulatory rules, we are not required to and, accordingly, did not restate previously-filed regulatory capital metrics and ratios in connection with the change in accounting method related to certain debt securities. As such, the December 31, 2015 amounts in the Table are as originally reported.

(3) The September 30, 2016 amount includes a transition capital conservation buffer of 0.625 percent and a transition G-SIB surcharge of 0.75 percent. The 2016 countercyclical capital buffer is zero.

(4) To be "well capitalized" under the current U.S. banking regulatory agency definitions, we must maintain a higher Total capital ratio of 10 percent.

(5) Basel 3 fully phased-in Advanced approaches estimates assume approval by U.S. banking regulators of our internal analytical models, including approval of the internal models methodology (IMM). As of September 30, 2016, we did not have regulatory approval for the IMM model.

(6) Fully phased-in regulatory capital minimums assume a capital conservation buffer of 2.5 percent and estimated G-SIB surcharge of 3.0 percent. The estimated fully phased-in countercyclical capital buffer is zero. We will be subject to fully phased-in regulatory minimums on January 1, 2019. The fully phased-in SLR minimum assumes a leverage buffer of 2.0 percent and is applicable on January 1, 2018.

(7) Total capital under the Advanced approaches differs from the Standardized approach due to differences in the amount permitted in Tier 2 capital related to the qualifying allowance for credit losses.

(8) Reflects adjusted average total assets for the three months ended September 30, 2016 and December 31, 2015.

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Common equity tier 1 capital under Basel 3 Advanced – Transition was \$169.9 billion at September 30, 2016, an increase of \$6.9 billion compared to December 31, 2015 driven by earnings and an increase in accumulated OCI, partially offset by dividends, common stock repurchases and the impact of certain transition provisions under the Basel 3 rules. During the nine months ended September 30, 2016, Total capital increased \$9.0 billion primarily driven by the same factors that drove the increase in Common equity tier 1 capital as well as issuances of preferred stock and subordinated debt.

Risk-weighted assets decreased \$55 billion during the nine months ended September 30, 2016 to \$1,547 billion primarily due to lower market risk, and lower exposures and improved credit quality on legacy retail products.

Table 14 presents the capital composition as measured under Basel 3 – Transition at September 30, 2016 and December 31, 2015.

Table 14

Capital Composition under Basel 3 – Transition<sup>(1, 2, 3)</sup>

(Dollars in millions)	September 30 2016	December 31 2015
Total common shareholders' equity	\$ 244,863	\$ 233,932
Goodwill	(69,192 )	(69,215 )
Deferred tax assets arising from net operating loss and tax credit carryforwards	(4,715 )	(3,434 )
Unamortized net periodic benefit costs recorded in accumulated OCI, net-of-tax	1,171	1,774
Net unrealized (gains) losses on debt and equity securities and net (gains) losses on derivatives recorded in accumulated OCI, net-of-tax	(560 )	1,220
Intangibles, other than mortgage servicing rights and goodwill	(1,279 )	(1,039 )
DVA related to liabilities and derivatives	252	204
Other	(615 )	(416 )
Common equity tier 1 capital	169,925	163,026
Qualifying preferred stock, net of issuance cost	25,220	22,273
Deferred tax assets arising from net operating loss and tax credit carryforwards	(3,143 )	(5,151 )
Trust preferred securities	—	1,430
Defined benefit pension fund assets	(375 )	(568 )
DVA related to liabilities and derivatives under transition	168	307
Other	(360 )	(539 )
Total Tier 1 capital	191,435	180,778
Long-term debt qualifying as Tier 2 capital	22,985	22,579
Eligible credit reserves included in Tier 2 capital	3,205	3,116
Nonqualifying capital instruments subject to phase out from Tier 2 capital	2,271	4,448
Other	(18 )	(9 )
Total Basel 3 capital	\$ 219,878	\$ 210,912

As an Advanced approaches institution, we are required to report regulatory capital risk-weighted assets and ratios (1) under both the Standardized and Advanced approaches. The approach that yields the lower ratio is to be used to assess capital adequacy, and was the Advanced approaches at September 30, 2016 and December 31, 2015.

Deductions from and adjustments to regulatory capital subject to transition provisions under Basel 3 are generally (2) recognized in 20 percent annual increments, and will be fully recognized as of January 1, 2018. Any assets that are a direct deduction from the computation of capital are excluded from risk-weighted assets and adjusted average total assets.

(3) Under the applicable bank regulatory rules, we are not required to and, accordingly, did not restate previously-filed regulatory capital metrics and ratios in connection with the change in accounting method related to certain debt securities. Therefore, the December 31, 2015 amounts in the Table are as originally reported. The cumulative

impact of this change in accounting method would have resulted in an immaterial pro forma decrease in the Corporation's Common equity tier 1 capital of approximately one basis point at December 31, 2015. The September 30, 2016 amounts in the Table reflect the change in accounting method. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

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Table 15 presents the components of our risk-weighted assets as measured under Basel 3 – Transition at September 30, 2016 and December 31, 2015.

Table 15  
Risk-weighted assets under Basel 3 –  
Transition <sup>(1)</sup>

(Dollars in billions)	September 30, 2016		December 31, 2015	
	Standardized	Advanced	Standardized	Advanced
	Approach	Approaches	Approach	Approaches
Credit risk	\$1,332	\$ 912	\$1,314	\$ 940
Market risk	64	62	89	86
Operational risk	n/a	500	n/a	500
Risks related to CVA	n/a	73	n/a	76
Total risk-weighted assets	\$1,396	\$ 1,547	\$1,403	\$ 1,602

<sup>(1)</sup> See Table 13, footnote 2.

n/a = not applicable

Table 16 presents a reconciliation of regulatory capital in accordance with Basel 3 Standardized – Transition to the Basel 3 Standardized approach fully phased-in estimates and Basel 3 Advanced approaches fully phased-in estimates at September 30, 2016 and December 31, 2015.

Table 16  
Regulatory Capital Reconciliations between Basel 3 Transition to Fully Phased-in <sup>(1, 2)</sup>

(Dollars in millions)	September 30 2016	December 31 2015
Common equity tier 1 capital (transition)	\$ 169,925	\$ 163,026
Deferred tax assets arising from net operating loss and tax credit carryforwards phased in during transition	(3,143)	(5,151)
Accumulated OCI phased in during transition	188	(1,917)
Intangibles phased in during transition	(853)	(1,559)
Defined benefit pension fund assets phased in during transition	(375)	(568)
DVA related to liabilities and derivatives phased in during transition	168	307
Other adjustments and deductions phased in during transition	(35)	(54)
Common equity tier 1 capital (fully phased-in)	165,875	154,084
Additional Tier 1 capital (transition)	21,510	17,752
Deferred tax assets arising from net operating loss and tax credit carryforwards phased out during transition	3,143	5,151
Trust preferred securities phased out during transition	—	(1,430)
Defined benefit pension fund assets phased out during transition	375	568
DVA related to liabilities and derivatives phased out during transition	(168)	(307)
Other transition adjustments to additional Tier 1 capital	(1)	(4)
Additional Tier 1 capital (fully phased-in)	24,859	21,730
Tier 1 capital (fully phased-in)	190,734	175,814
Tier 2 capital (transition)	28,443	30,134
Nonqualifying capital instruments phased out during transition	(2,271)	(4,448)
Other adjustments to Tier 2 capital	9,202	9,667
Tier 2 capital (fully phased-in)	35,374	35,353
Basel 3 Standardized approach Total capital (fully phased-in)	226,108	211,167
Change in Tier 2 qualifying allowance for credit losses	(9,253)	(9,764)

Basel 3 Advanced approaches Total capital (fully phased-in)	\$ 216,855	\$ 201,403
Risk-weighted assets – As reported to Basel 3 (fully phased-in)		
Basel 3 Standardized approach risk-weighted assets as reported	\$ 1,395,541	\$ 1,403,293
Changes in risk-weighted assets from reported to fully phased-in	15,587	24,089
Basel 3 Standardized approach risk-weighted assets (fully phased-in)	\$ 1,411,128	\$ 1,427,382
Basel 3 Advanced approaches risk-weighted assets as reported	\$ 1,547,221	\$ 1,602,373
Changes in risk-weighted assets from reported to fully phased-in	(23,502 )	(27,690 )
Basel 3 Advanced approaches risk-weighted assets (fully phased-in) <sup>(3)</sup>	\$ 1,523,719	\$ 1,574,683

As an Advanced approaches institution, we are required to report regulatory capital risk-weighted assets and ratios (1) under both the Standardized and Advanced approaches. The approach that yields the lower ratio is to be used to assess capital adequacy, and was the Advanced approaches at September 30, 2016 and December 31, 2015.

(2) See Table 13, footnote 2.

Basel 3 fully phased-in Advanced approaches estimates assume approval by U.S. banking regulators of our internal (3) analytical models, including approval of the IMM. As of September 30, 2016, we did not have regulatory approval for the IMM model.

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## Bank of America, N.A. Regulatory Capital

Table 17 presents transition regulatory capital information for BANA in accordance with Basel 3 Standardized and Advanced approaches as measured at September 30, 2016 and December 31, 2015. As of September 30, 2016, BANA meets the definition of "well capitalized" under the PCA framework.

Table 17

## Bank of America, N.A. Regulatory Capital under Basel 3

(Dollars in millions)	September 30, 2016				December 31, 2015			
	Standardized Approach				Advanced Approaches			
	Ratio	Amount	Minimum Required (1)		Ratio	Amount	Minimum Required (1)	
Common equity tier 1 capital	13.1%	\$152,976	6.5	%	14.5%	\$152,976	6.5	%
Tier 1 capital	13.1	152,976	8.0		14.5	152,976	8.0	
Total capital	14.3	167,037	10.0		15.1	158,345	10.0	
Tier 1 leverage	9.6	152,976	5.0		9.6	152,976	5.0	
Common equity tier 1 capital	12.2%	\$144,869	6.5	%	13.1%	\$144,869	6.5	%
Tier 1 capital	12.2	144,869	8.0		13.1	144,869	8.0	
Total capital	13.5	159,871	10.0		13.6	150,624	10.0	
Tier 1 leverage	9.2	144,869	5.0		9.2	144,869	5.0	

(1) Percent required to meet guidelines to be considered "well capitalized" under the PCA framework.

## Regulatory Developments

## Minimum Total Loss-Absorbing Capacity

On October 30, 2015, the Federal Reserve issued a notice of proposed rulemaking (NPR) to establish external total loss-absorbing capacity (TLAC) requirements to improve the resolvability and resiliency of large, interconnected BHCs. Under the proposal, U.S. G-SIBs would be required to maintain a minimum external TLAC of the greater of: (1) 16 percent of risk-weighted assets in 2019, increasing to 18 percent of risk-weighted assets in 2022 (plus additional TLAC equal to enough Common equity tier 1 capital as a percentage of risk-weighted assets to cover the capital conservation buffer, any applicable countercyclical capital buffer plus the applicable method 1 G-SIB surcharge), or (2) 9.5 percent of the denominator of the SLR. In addition, U.S. G-SIBs must meet a minimum long-term debt requirement equal to the greater of: 6.0 percent of risk-weighted assets plus the applicable method 2 G-SIB surcharge, or 4.5 percent of the denominator of the SLR.

## Revisions to Approaches for Measuring Risk-weighted Assets

The Basel Committee has several open proposals to revise key methodologies for measuring risk-weighted assets. The proposals include a standardized approach for credit risk, standardized approach for operational risk, revisions to the credit valuation adjustment (CVA) risk framework and constraints on the use of internal models. The Basel Committee has also finalized a revised standardized model for counterparty credit risk, revisions to the securitization framework and its fundamental review of the trading book, which updates both modeled and standardized approaches for market risk measurement. These revisions are to be coupled with a proposed capital floor framework to limit the extent to which banks can reduce risk-weighted asset levels through the use of internal models, both at the input parameter and aggregate risk-weighted asset level. The Basel Committee expects to finalize the outstanding proposals



by early 2017. Once the proposals are finalized, U.S. banking regulators may update the U.S. Basel 3 rules to incorporate the Basel Committee revisions.

#### Single-Counterparty Credit Limits

On March 4, 2016, the Federal Reserve issued an NPR to establish Single-Counterparty Credit Limits (SCCL) for large U.S. BHCs. The SCCL rule is designed to complement and serve as a backstop to risk-based capital requirements to ensure that the maximum possible loss that a bank could incur due to a single counterparty's default would not endanger the bank's survival. Under the proposal, U.S. BHCs must calculate SCCL by dividing the net aggregate credit exposure to a given counterparty by a bank's eligible Tier 1 capital base, ensuring that exposure to G-SIBs and other nonbank systemically important financial institutions does not breach 15 percent and exposures to other counterparties do not breach 25 percent.

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Broker-dealer Regulatory Capital and Securities Regulation

The Corporation's principal U.S. broker-dealer subsidiaries are Merrill Lynch, Pierce, Fenner & Smith, Incorporated (MLPF&S) and Merrill Lynch Professional Clearing Corp (MLPCC). MLPCC is a fully-guaranteed subsidiary of MLPF&S and provides clearing and settlement services. Both entities are subject to the net capital requirements of SEC Rule 15c3-1. Both entities are also registered as futures commission merchants and are subject to the Commodity Futures Trading Commission Regulation 1.17.

MLPF&S has elected to compute the minimum capital requirement in accordance with the Alternative Net Capital Requirement as permitted by SEC Rule 15c3-1. At September 30, 2016, MLPF&S's regulatory net capital as defined by Rule 15c3-1 was \$12.2 billion and exceeded the minimum requirement of \$1.6 billion by \$10.6 billion. MLPCC's net capital of \$3.1 billion exceeded the minimum requirement of \$451 million by \$2.7 billion.

In accordance with the Alternative Net Capital Requirements, MLPF&S is required to maintain tentative net capital in excess of \$1.0 billion, net capital in excess of \$500 million and notify the Securities and Exchange Commission in the event its tentative net capital is less than \$5.0 billion. At September 30, 2016, MLPF&S had tentative net capital and net capital in excess of the minimum and notification requirements.

Merrill Lynch International (MLI), a U.K. investment firm, is regulated by the Prudential Regulation Authority and the Financial Conduct Authority, and is subject to certain regulatory capital requirements. At September 30, 2016, MLI's capital resources were \$34.9 billion which exceeded the minimum requirement of \$15.6 billion.

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## Common and Preferred Stock Dividends

Table 18 is a summary of our cash dividend declarations on preferred stock during the third quarter of 2016 and through November 1, 2016. During the third quarter of 2016, we declared \$503 million of cash dividends on preferred stock. For more information on preferred stock and a summary of our declared quarterly cash dividends on common stock, see Note 11 – Shareholders' Equity to the Consolidated Financial Statements.

Table 18  
Preferred Stock Cash Dividend Summary

Preferred Stock	Outstanding Notional Amount (in millions)	Declaration Date	Record Date	Payment Date	Per Annum Dividend Rate	Dividend Per Share
Series B <sup>(1)</sup>	\$ 1	July 27, 2016	October 11, 2016	October 25, 2016	7.00	% \$1.75
		October 27, 2016	January 11, 2017	January 25, 2017	7.00	1.75
Series D <sup>(2)</sup>	\$ 654	July 7, 2016	August 31, 2016	September 14, 2016	6.204	% \$0.38775
		October 10, 2016	November 30, 2016	December 14, 2016	6.204	0.38775
Series E <sup>(2)</sup>	\$ 317	July 7, 2016	July 29, 2016	August 15, 2016	Floating	\$0.25556
		October 10, 2016	October 31, 2016	November 15, 2016	Floating	0.25556
Series F	\$ 141	July 7, 2016	August 31, 2016	September 15, 2016	Floating	\$1,022.22222
		October 10, 2016	November 30, 2016	December 15, 2016	Floating	1,011.11111
Series G	\$ 493	July 7, 2016	August 31, 2016	September 15, 2016	Adjustable	\$1,022.22222
		October 10, 2016	November 30, 2016	December 15, 2016	Adjustable	1,011.11111
Series I <sup>(2)</sup>	\$ 365	July 7, 2016	September 15, 2016	October 3, 2016	6.625	% \$0.4140625
		October 10, 2016	December 15, 2016	January 3, 2017	6.625	0.4140625
Series K <sup>(3, 4)</sup>	\$ 1,544	July 7, 2016	July 15, 2016	August 1, 2016	Fixed-to-floating	\$40.00
Series L	\$ 3,080	September 16, 2016	October 1, 2016	October 31, 2016	7.25	% \$18.125
Series M <sup>(3, 4)</sup>	\$ 1,310	October 10, 2016	October 31, 2016	November 15, 2016	Fixed-to-floating	\$40.625
Series T	\$ 5,000	July 27, 2016	September 25, 2016	October 11, 2016	6.00	% \$1,500.00
		October 27, 2016	December 26, 2016	January 10, 2017	6.00	1,500.00
Series U <sup>(3, 4)</sup>	\$ 1,000	October 10, 2016	November 15, 2016	December 1, 2016	Fixed-to-floating	\$26.00
Series V <sup>(3, 4)</sup>	\$ 1,500	October 10, 2016	December 1, 2016	December 19, 2016	Fixed-to-floating	\$25.625
Series W <sup>(2)</sup>	\$ 1,100	July 7, 2016	August 15, 2016		6.625	% \$0.4140625

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				September 9, 2016		
		October 10, 2016	November 15, 2016	December 9, 2016	6.625	0.4140625
Series X <sup>(3, 4)</sup>	\$ 2,000	July 7, 2016	August 15, 2016	September 6, 2016	Fixed-to-floating	\$31.25
Series Y <sup>(2)</sup>	\$ 1,100	September 16, 2016	October 1, 2016	October 27, 2016	6.50	% \$0.40625
Series Z <sup>(3, 4)</sup>	\$ 1,400	September 16, 2016	October 1, 2016	October 24, 2016	Fixed-to-floating	\$32.50
Series AA <sup>(3, 4)</sup>	\$ 1,900	July 7, 2016	September 1, 2016	September 19, 2016	Fixed-to-floating	\$30.50
Series CC <sup>(2)</sup>	\$ 1,100	September 16, 2016	October 1, 2016	October 31, 2016	6.20	% \$0.3875
Series DD <sup>(3, 4)</sup>	\$ 1,000	July 7, 2016	August 15, 2016	September 12, 2016	Fixed-to-floating	\$31.50
Series EE <sup>(2)</sup>	\$ 900	September 16, 2016	October 1, 2016	October 25, 2016	6.00	% \$0.375
Series 1 <sup>(5)</sup>	\$ 98	July 7, 2016	August 15, 2016	August 30, 2016	Floating	\$0.18750
		October 10, 2016	November 15, 2016	November 28, 2016	Floating	0.18750
Series 2 <sup>(5)</sup>	\$ 299	July 7, 2016	August 15, 2016	August 30, 2016	Floating	\$0.19167
		October 10, 2016	November 15, 2016	November 28, 2016	Floating	0.19167
Series 3 <sup>(5)</sup>	\$ 653	July 7, 2016	August 15, 2016	August 29, 2016	6.375	% \$0.3984375
		October 10, 2016	November 15, 2016	November 28, 2016	6.375	0.3984375
Series 4 <sup>(5)</sup>	\$ 210	July 7, 2016	August 15, 2016	August 30, 2016	Floating	\$0.25556
		October 10, 2016	November 15, 2016	November 28, 2016	Floating	0.25556
Series 5 <sup>(5)</sup>	\$ 422	July 7, 2016	August 1, 2016	August 22, 2016	Floating	\$0.25556
		October 10, 2016	November 1, 2016	November 21, 2016	Floating	0.25556

(1) Dividends are cumulative.

(2) Dividends per depositary share, each representing a 1/1,000<sup>th</sup> interest in a share of preferred stock.

(3) Initially pays dividends semi-annually.

(4) Dividends per depositary share, each representing a 1/25<sup>th</sup> interest in a share of preferred stock.

(5) Dividends per depositary share, each representing a 1/1,200<sup>th</sup> interest in a share of preferred stock.

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### Liquidity Risk

#### Funding and Liquidity Risk Management

Liquidity risk is the potential inability to meet expected or unexpected cash flow and collateral needs while continuing to support our businesses and customers with the appropriate funding sources under a range of economic conditions. Our primary liquidity risk management objective is to meet all contractual and contingent financial obligations at all times, including during periods of stress. To achieve that objective, we analyze and monitor our liquidity risk under expected and stressed conditions, maintain liquidity and access to diverse funding sources, including our stable deposit base, and seek to align liquidity-related incentives and risks.

We define liquidity as readily available assets, limited to cash and high-quality, liquid, unencumbered securities that we can use to meet our contractual and contingent financial obligations as those obligations arise. We manage our liquidity position through line of business and asset-liability management activities, as well as through our legal entity funding strategy, on both a forward and current (including intraday) basis under both expected and stressed conditions. We believe that a centralized approach to funding and liquidity management within Corporate Treasury enhances our ability to monitor liquidity requirements, maximizes access to funding sources, minimizes borrowing costs and facilitates timely responses to liquidity events. For more information regarding global funding and liquidity risk management, see Liquidity Risk – Funding and Liquidity Risk Management in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

#### Global Liquidity Sources and Other Unencumbered Assets

We maintain liquidity available to Bank of America Corporation, including the parent company and selected subsidiaries, in the form of cash and high-quality, liquid, unencumbered securities. Our liquidity buffer, referred to as Global Liquidity Sources (GLS), formerly GELS, is comprised of assets that are readily available to the parent company and selected subsidiaries, including holding company, bank and broker-dealer subsidiaries, even during stressed market conditions. Our cash is primarily on deposit with the Federal Reserve and, to a lesser extent, central banks outside of the U.S. We limit the composition of high-quality, liquid, unencumbered securities to U.S. government securities, U.S. agency securities, U.S. agency MBS and a select group of non-U.S. government and supranational securities. We believe we can quickly obtain cash for these securities, even in stressed conditions, through repurchase agreements or outright sales. We hold our GLS in legal entities that allow us to meet the liquidity requirements of our global businesses, and we consider the impact of potential regulatory, tax, legal and other restrictions that could limit the transferability of funds among entities.

Pursuant to the Federal Reserve and FDIC request disclosed in our Current Report on Form 8-K dated April 13, 2016, we provided our resolution plan submission on September 30, 2016. In connection with our resolution planning activities, in the third quarter, we entered into intercompany arrangements with certain key subsidiaries under which we have transferred certain of our parent company assets (and have agreed to transfer certain additional parent company assets) to NB Holdings, Inc., a wholly-owned holding company subsidiary (NB Holdings). The parent company is expected to continue to have access to the same flow of dividends, interest, and other amounts of cash necessary to service its debt, pay dividends, and perform other obligations as it would have had if it had not entered into these arrangements and transferred any assets.

In consideration for the transfer of assets, NB Holdings issued a subordinated note to the parent company in a principal amount equal to the value of the transferred assets; the aggregate principal amount of the note will increase by the amount of any future asset transfers. The note will pay quarterly interest in excess of any interest payable on any intercompany loans transferred to NB Holdings. NB Holdings also provided the parent company with a committed line of credit that allows the parent company to draw funds necessary to service near-term cash needs.

These arrangements support our preferred single point of entry resolution strategy, under which only the parent company would be resolved under the U.S Bankruptcy Code. These arrangements include provisions to terminate the line of credit, forgive the subordinated note and require the parent company to transfer its remaining financial assets to NB Holdings if our projected liquidity resources deteriorate so severely that resolution of the parent company becomes imminent.

Our GLS are substantially the same in composition to what qualifies as High Quality Liquid Assets (HQLA) under the final U.S. Liquidity Coverage Ratio (LCR) rules. For more information on the final LCR rules, see Liquidity Risk – Basel 3 Liquidity Standards on page 49.

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Our GLS were \$522 billion and \$504 billion at September 30, 2016 and December 31, 2015 and were as shown in Table 19.

Table 19  
Global Liquidity Sources

(Dollars in billions)	September 30 2016	December 31 2015	Average for Three Months Ended September 30, 2016
Parent company and NB Holdings	\$ 80	\$ 96	\$ 85
Bank subsidiaries	394	361	392
Other regulated entities	48	47	46
Total Global Liquidity Sources	\$ 522	\$ 504	\$ 523

As shown in Table 19, parent company and NB Holdings liquidity totaled \$80 billion and \$96 billion at September 30, 2016 and December 31, 2015. The decrease in parent company and NB Holdings liquidity was primarily due to the BNY Mellon settlement payment in the first quarter of 2016. Typically, parent company and NB Holdings liquidity is in the form of cash deposited with BANA.

Liquidity held at our bank subsidiaries totaled \$394 billion and \$361 billion at September 30, 2016 and December 31, 2015. The increase in bank subsidiaries' liquidity was primarily due to deposit inflows. Liquidity at bank subsidiaries excludes the cash deposited by the parent company and NB Holdings. Our bank subsidiaries can also generate incremental liquidity by pledging a range of unencumbered loans and securities to certain Federal Home Loan Banks (FHLBs) and the Federal Reserve Discount Window. The cash we could have obtained by borrowing against this pool of specifically-identified eligible assets was \$294 billion and \$252 billion at September 30, 2016 and December 31, 2015. We have established operational procedures to enable us to borrow against these assets, including regularly monitoring our total pool of eligible loans and securities collateral. Eligibility is defined in guidelines from the FHLBs and the Federal Reserve and is subject to change at their discretion. Due to regulatory restrictions, liquidity generated by the bank subsidiaries can generally be used only to fund obligations within the bank subsidiaries and can only be transferred to the parent company or nonbank subsidiaries with prior regulatory approval.

Liquidity held at our other regulated entities, comprised primarily of broker-dealer subsidiaries, totaled \$48 billion and \$47 billion at September 30, 2016 and December 31, 2015. Our other regulated entities also held unencumbered investment-grade securities and equities that we believe could be used to generate additional liquidity. Liquidity held in an other regulated entity is primarily available to meet the obligations of that entity and transfers to the parent company or to any other subsidiary may be subject to prior regulatory approval due to regulatory restrictions and minimum requirements.

Table 20 presents the composition of GLS at September 30, 2016 and December 31, 2015.

Table 20  
Global Liquidity Sources Composition

(Dollars in billions)	September 30 2016	December 31 2015
Cash on deposit	\$ 111	\$ 119
U.S. Treasury securities	62	38
U.S. agency securities and mortgage-backed securities	331	327
Non-U.S. government and supranational securities	18	20

Total Global Liquidity Sources	\$ 522	\$ 504
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### Time-to-required Funding and Liquidity Stress Analysis

We use a variety of metrics to determine the appropriate amounts of liquidity to maintain at the parent company and our subsidiaries. One metric we use to evaluate the appropriate level of liquidity at the parent company and NB Holdings is "time-to-required funding (TTF)." This debt coverage measure indicates the number of months the parent company can continue to meet its unsecured contractual obligations as they come due using only the parent company and NB Holdings' liquidity sources without issuing any new debt or accessing any additional liquidity sources. We define unsecured contractual obligations for purposes of this metric as maturities of senior or subordinated debt issued or guaranteed by Bank of America Corporation. These include certain unsecured debt instruments, primarily structured liabilities, which we may be required to settle for cash prior to maturity. Prior to the third quarter of 2016, the TTF metric incorporated only the liquidity of the parent company. During the third quarter of 2016, the TTF metric was expanded to include the liquidity of NB Holdings, following changes in the Corporation's liquidity management practices, initiated in connection with the Corporation's resolution planning activities, that include maintaining at NB Holdings certain liquidity previously held solely at the parent company. Our time-to-required funding was 38 months at September 30, 2016.

We also utilize liquidity stress analysis to assist us in determining the appropriate amounts of liquidity to maintain at the parent company and our subsidiaries. The liquidity stress testing process is an integral part of analyzing our potential contractual and contingent cash outflows. We evaluate the liquidity requirements under a range of scenarios with varying levels of severity and time horizons. The scenarios we consider and utilize incorporate market-wide and Corporation-specific events, including potential credit rating downgrades for the parent company and our subsidiaries, and more severe events including potential resolution scenarios. The scenarios are based on historical experience of the Corporation, experience of distressed and failed financial firms, regulatory guidance, and both expected and unexpected future events.

The types of potential contractual and contingent cash outflows we consider in our scenarios may include, but are not limited to, upcoming contractual maturities of unsecured debt and reductions in new debt issuance; diminished access to secured financing markets; potential deposit withdrawals; increased draws on loan commitments, liquidity facilities and letters of credit; additional collateral that counterparties could call if our credit ratings were downgraded; collateral and margin requirements arising from market value changes; and potential liquidity required to maintain businesses and finance customer activities. Changes in certain market factors including, but not limited to, credit rating downgrades, could negatively impact potential contractual and contingent outflows and the related financial instruments, and in some cases these impacts could be material to our financial results.

We consider all sources of funds that we could access during each stress scenario and focus particularly on matching available sources with corresponding liquidity requirements by legal entity. We also use the stress modeling results to manage our asset-liability profile and establish limits and guidelines on certain funding sources and businesses.

### Basel 3 Liquidity Standards

There are two liquidity risk-related standards that are considered part of the Basel 3 liquidity standards: the LCR and the Net Stable Funding Ratio (NSFR).

The LCR is calculated as the amount of a financial institution's unencumbered HQLA relative to the estimated net cash outflows the institution could encounter over a 30-day period of significant liquidity stress, expressed as a percentage. An initial minimum LCR of 80 percent was required as of January 2015, increased to 90 percent as of January 2016 and will increase to 100 percent in January 2017. These minimum requirements are applicable to the Corporation on a consolidated basis and to our insured depository institutions. As of September 30, 2016, we estimate that the consolidated Corporation was above the 2017 LCR requirements. The Corporation's LCR may fluctuate from

period to period due to normal business flows from customer activity.

In 2014, the Basel Committee issued a final standard for the NSFR, the standard that is intended to reduce funding risk over a longer time horizon. The NSFR is designed to ensure an appropriate amount of stable funding, generally capital and liabilities maturing beyond one year, given the mix of assets and off-balance sheet items. In April 2016, U.S. banking regulators issued a proposal for an NSFR requirement applicable to U.S. financial institutions. The U.S. NSFR would apply to the Corporation on a consolidated basis and to our insured depository institutions beginning on January 1, 2018. We expect to meet the NSFR requirement within the regulatory timeline.

#### Diversified Funding Sources

We fund our assets primarily with a mix of deposits and secured and unsecured liabilities through a centralized, globally coordinated funding approach. We diversify our funding globally across products, programs, markets, currencies and investor groups.

The primary benefits of our centralized funding approach include greater control, reduced funding costs, wider name recognition by investors and greater flexibility to meet the variable funding requirements of subsidiaries. Where regulations, time zone differences or other business considerations make parent company funding impractical, certain other subsidiaries may issue their own debt.

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We fund a substantial portion of our lending activities through our deposits, which were \$1.23 trillion and \$1.20 trillion at September 30, 2016 and December 31, 2015. Deposits are primarily generated by our Consumer Banking, GWIM and Global Banking segments. These deposits are diversified by clients, product type and geography, and the majority of our U.S. deposits are insured by the FDIC. We consider a substantial portion of our deposits to be a stable, low-cost and consistent source of funding. We believe this deposit funding is generally less sensitive to interest rate changes, market volatility or changes in our credit ratings than wholesale funding sources. Our lending activities may also be financed through secured borrowings, including credit card securitizations and securitizations with GSEs, the FHA and private-label investors, as well as FHLB loans.

Our trading activities in other regulated entities are primarily funded on a secured basis through securities lending and repurchase agreements and these amounts will vary based on customer activity and market conditions. We believe funding these activities in the secured financing markets is more cost-efficient and less sensitive to changes in our credit ratings than unsecured financing. Repurchase agreements are generally short-term and often overnight. Disruptions in secured financing markets for financial institutions have occurred in prior market cycles which resulted in adverse changes in terms or significant reductions in the availability of such financing. We manage the liquidity risks arising from secured funding by sourcing funding globally from a diverse group of counterparties, providing a range of securities collateral and pursuing longer durations, when appropriate. For more information on secured financing agreements, see Note 9 – Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings to the Consolidated Financial Statements.

We issue long-term unsecured debt in a variety of maturities and currencies to achieve cost-efficient funding and to maintain an appropriate maturity profile. While the cost and availability of unsecured funding may be negatively impacted by general market conditions or by matters specific to the financial services industry or the Corporation, we seek to mitigate refinancing risk by actively managing the amount of our borrowings that we anticipate will mature within any month or quarter.

During the three and nine months ended September 30, 2016, we issued \$8.9 billion and \$24.8 billion of long-term debt, consisting of \$7.2 billion and \$18.7 billion for Bank of America Corporation, \$35 million and \$966 million for Bank of America, N.A. and \$1.7 billion and \$5.1 billion of other debt.

Table 21 presents the carrying value of aggregate annual contractual maturities of long-term debt as of September 30, 2016. During the nine months ended September 30, 2016, we had total long-term debt maturities and purchases of \$41.3 billion consisting of \$25.6 billion for Bank of America Corporation, \$9.1 billion for Bank of America, N.A. and \$6.6 billion of other debt.

Table 21  
Long-term Debt By Maturity

(Dollars in millions)	Remainder of						Total
	2016	2017	2018	2019	2020	Thereafter	
<b>Bank of America Corporation</b>							
Senior notes	\$ 3,042	\$18,336	\$20,007	\$18,290	\$11,594	\$ 52,751	\$124,020
Senior structured notes	802	3,941	2,950	1,422	980	8,200	18,295
Subordinated notes	352	5,024	2,770	1,498	—	21,078	30,722
Junior subordinated notes	—	—	—	—	—	3,830	3,830
<b>Total Bank of America Corporation</b>	<b>4,196</b>	<b>27,301</b>	<b>25,727</b>	<b>21,210</b>	<b>12,574</b>	<b>85,859</b>	<b>176,867</b>
<b>Bank of America, N.A.</b>							
Senior notes	2,499	3,649	5,790	—	—	21	11,959
Subordinated notes	—	3,359	—	1	—	1,831	5,191

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Advances from Federal Home Loan Banks	—	9	9	14	12	120	164
Securitized and other Bank VIEs <sup>(1)</sup>	11	3,477	2,300	3,199	—	134	9,121
Other	—	2,718	107	111	14	133	3,083
Total Bank of America, N.A.	2,510	13,212	8,206	3,325	26	2,239	29,518
Other debt							
Structured liabilities	920	3,834	1,212	1,418	1,059	8,168	16,611
Nonbank VIEs <sup>(1)</sup>	451	244	29	16	—	1,348	2,088
Other	—	1	—	—	—	51	52
Total other debt	1,371	4,079	1,241	1,434	1,059	9,567	18,751
Total long-term debt	\$ 8,077	\$44,592	\$35,174	\$25,969	\$13,659	\$ 97,665	\$225,136

<sup>(1)</sup> Represents the total long-term debt included in the liabilities of consolidated variable interest entities (VIEs) on the Consolidated Balance Sheet.

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Table 22 presents our long-term debt by major currency at September 30, 2016 and December 31, 2015.

Table 22

## Long-term Debt By Major Currency

(Dollars in millions)	September 30	December 31
	2016	2015
U.S. Dollar	\$ 175,874	\$ 190,381
Euro	30,839	29,797
British Pound	7,504	7,080
Japanese Yen	4,468	3,099
Australian Dollar	3,083	2,534
Canadian Dollar	1,095	1,428
Other	2,273	2,445
Total long-term debt	\$ 225,136	\$ 236,764

Total long-term debt decreased \$11.6 billion, or five percent, during the nine months ended September 30, 2016 primarily due to maturities outpacing issuances. We may, from time to time, purchase outstanding debt instruments in various transactions, depending on prevailing market conditions, liquidity and other factors. In addition, our other regulated entities may make markets in our debt instruments to provide liquidity for investors. For more information on long-term debt funding, see Note 11 – Long-term Debt to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K and for more information regarding funding and liquidity risk management, see Liquidity Risk – Time-to-required Funding and Stress Modeling in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

We use derivative transactions to manage the duration, interest rate and currency risks of our borrowings, considering the characteristics of the assets they are funding. For further details on our ALM activities, see Interest Rate Risk Management for the Banking Book on page 89.

We may also issue unsecured debt in the form of structured notes for client purposes. During the three and nine months ended September 30, 2016, we issued \$1.7 billion and \$5.2 billion of structured notes, a majority of which were issued by Bank of America Corporation. Structured notes are debt obligations that pay investors returns linked to other debt or equity securities, indices, currencies or commodities. We typically hedge the returns we are obligated to pay on these liabilities with derivatives and/or investments in the underlying instruments, so that from a funding perspective, the cost is similar to our other unsecured long-term debt. We could be required to settle certain structured note obligations for cash or other securities prior to maturity under certain circumstances, which we consider for liquidity planning purposes. We believe, however, that a portion of such borrowings will remain outstanding beyond the earliest put or redemption date.

Substantially all of our senior and subordinated debt obligations contain no provisions that could trigger a requirement for an early repayment, require additional collateral support, result in changes to terms, accelerate maturity or create additional financial obligations upon an adverse change in our credit ratings, financial ratios, earnings, cash flows or stock price.

## Contingency Planning

We maintain contingency funding plans that outline our potential responses to liquidity stress events at various levels of severity. These policies and plans are based on stress scenarios and include potential funding strategies and communication and notification procedures that we would implement in the event we experienced stressed liquidity conditions. We periodically review and test the contingency funding plans to validate efficacy and assess readiness.

Our U.S. bank subsidiaries can access contingency funding through the Federal Reserve Discount Window. Certain non-U.S. subsidiaries have access to central bank facilities in the jurisdictions in which they operate. While we do not rely on these sources in our liquidity modeling, we maintain the policies, procedures and governance processes that would enable us to access these sources if necessary.

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## Credit Ratings

Credit ratings and outlooks are opinions expressed by rating agencies on our creditworthiness and that of our obligations or securities, including long-term debt, short-term borrowings, preferred stock and other securities, including asset securitizations. Table 23 presents the Corporation's current long-term/short-term senior debt ratings and outlooks expressed by the rating agencies. These ratings have not changed from those disclosed in the Corporation's 2015 Annual Report on Form 10-K. For more information on credit ratings, see Liquidity Risk – Credit Ratings in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

Table 23

## Senior Debt Ratings

	Moody's Investors Service			Standard & Poor's			Fitch Ratings		
	Long-term	Short-term	Outlook	Long-term	Short-term <sup>(1)</sup>	Outlook	Long-term	Short-term	Outlook
Bank of America Corporation	Baa1	P-2	Stable	BBB+	A-2	Stable	A	F1	Stable
Bank of America, N.A.	A1	P-1	Stable	A	A-1	CreditWatch Positive	A+	F1	Stable
Merrill Lynch, Pierce, Fenner & Smith, Incorporated	NR	NR	NR	A	A-1	CreditWatch Positive	A+	F1	Stable
Merrill Lynch International	NR	NR	NR	A	A-1	CreditWatch Positive	A	F1	Positive

<sup>(1)</sup> Standard & Poor's Ratings Services short-term ratings are not on CreditWatch.

NR = not rated

For information on the additional collateral and termination payments that could be required in connection with certain OTC derivative contracts and other trading agreements as a result of such a credit rating downgrade, see Note 2 – Derivatives to the Consolidated Financial Statements herein and Item 1A. Risk Factors of the Corporation's 2015 Annual Report on Form 10-K.

## Credit Risk Management

For more information on our credit risk management activities, see Consumer Portfolio Credit Risk Management below, Commercial Portfolio Credit Risk Management on page 67, Non-U.S. Portfolio on page 78, Provision for Credit Losses on page 79, Allowance for Credit Losses on page 80, and Note 4 – Outstanding Loans and Leases and Note 5 – Allowance for Credit Losses to the Consolidated Financial Statements.

## Consumer Portfolio Credit Risk Management

Credit risk management for the consumer portfolio begins with initial underwriting and continues throughout a borrower's credit cycle. Statistical techniques in conjunction with experiential judgment are used in all aspects of portfolio management including underwriting, product pricing, risk appetite, setting credit limits, and establishing operating processes and metrics to quantify and balance risks and returns. Statistical models are built using detailed behavioral information from external sources such as credit bureaus and/or internal historical experience. These models are a component of our consumer credit risk management process and are used in part to assist in making both new and ongoing credit decisions, as well as portfolio management strategies, including authorizations and line management, collection practices and strategies, and determination of the allowance for loan and lease losses and allocated capital for credit risk.



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## Consumer Credit Portfolio

Improvement in the U.S. unemployment rate and home prices continued during the three and nine months ended September 30, 2016 resulting in improved credit quality and lower credit losses across most major consumer portfolios compared to the same periods in 2015. The 30 and 90 days or more past due balances declined across nearly all consumer loan portfolios during the nine months ended September 30, 2016 as a result of improved delinquency trends.

Improved credit quality, continued loan balance run-off and sales across the consumer portfolio drove a \$1.0 billion decrease in the consumer allowance for loan and lease losses during the nine months ended September 30, 2016 to \$6.4 billion at September 30, 2016. For additional information, see Allowance for Credit Losses on page 80.

For more information on our accounting policies regarding delinquencies, nonperforming status, charge-offs and troubled debt restructurings (TDRs) for the consumer portfolio, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

Table 24 presents our outstanding consumer loans and leases, and the PCI loan portfolio. In addition to being included in the "Outstandings" columns in Table 24, PCI loans are also shown separately in the "Purchased Credit-impaired Loan Portfolio" columns. The impact of the PCI loan portfolio on certain credit statistics is reported where appropriate. For more information on PCI loans, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62 and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 24

## Consumer Loans and Leases

(Dollars in millions)	Outstandings		Purchased Credit-impaired Loan Portfolio	
	September 30 2016	December 31 2015	September 30 2016	December 31 2015
Residential mortgage <sup>(1)</sup>	\$ 187,968	\$ 187,911	\$ 10,614	\$ 12,066
Home equity	68,997	75,948	3,854	4,619
U.S. credit card	88,789	89,602	n/a	n/a
Non-U.S. credit card	9,258	9,975	n/a	n/a
Direct/Indirect consumer <sup>(2)</sup>	93,294	88,795	n/a	n/a
Other consumer <sup>(3)</sup>	2,389	2,067	n/a	n/a
Consumer loans excluding loans accounted for under the fair value option	450,695	454,298	14,468	16,685
Loans accounted for under the fair value option <sup>(4)</sup>	1,768	1,871	n/a	n/a
Total consumer loans and leases	\$ 452,463	\$ 456,169	\$ 14,468	\$ 16,685

(1)

Outstandings include pay option loans of \$1.9 billion and \$2.3 billion at September 30, 2016 and December 31, 2015. We no longer originate pay option loans.

(2) Outstandings include auto and specialty lending loans of \$47.8 billion and \$42.6 billion, unsecured consumer lending loans of \$630 million and \$886 million, U.S. securities-based lending loans of \$40.1 billion and \$39.8 billion, non-U.S. consumer loans of \$3.1 billion and \$3.9 billion, student loans of \$514 million and \$564 million and other consumer loans of \$1.1 billion and \$1.0 billion at September 30, 2016 and December 31, 2015.

(3) Outstandings include consumer finance loans of \$489 million and \$564 million, consumer leases of \$1.7 billion and \$1.4 billion and consumer overdrafts of \$151 million and \$146 million at September 30, 2016 and December 31, 2015.

(4) Consumer loans accounted for under the fair value option include residential mortgage loans of \$1.4 billion and \$1.6 billion and home equity loans of \$340 million and \$250 million at September 30, 2016 and December 31, 2015. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

n/a = not applicable

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Table 25 presents consumer nonperforming loans and accruing consumer loans past due 90 days or more. Nonperforming loans do not include past due consumer credit card loans, other unsecured loans and in general, consumer loans not secured by real estate (loans discharged in Chapter 7 bankruptcy are included) as these loans are typically charged off no later than the end of the month in which the loan becomes 180 days past due. Real estate-secured past due consumer loans that are insured by the FHA or individually insured under long-term standby agreements with FNMA and FHLMC (collectively, the fully-insured loan portfolio) are reported as accruing as opposed to nonperforming since the principal repayment is insured. Fully-insured loans included in accruing past due 90 days or more are primarily from our repurchases of delinquent FHA loans pursuant to our servicing agreements with GNMA. Additionally, nonperforming loans and accruing balances past due 90 days or more do not include the PCI loan portfolio or loans accounted for under the fair value option even though the customer may be contractually past due.

Table 25  
Consumer Credit Quality

(Dollars in millions)	Nonperforming		Accruing Past Due 90 Days or More	
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015
Residential mortgage <sup>(1)</sup>	\$3,341	\$ 4,803	\$5,117	\$ 7,150
Home equity	2,982	3,337	—	—
U.S. credit card	n/a	n/a	702	789
Non-U.S. credit card	n/a	n/a	65	76
Direct/Indirect consumer	26	24	29	39
Other consumer	1	1	3	3
Total <sup>(2)</sup>	\$6,350	\$ 8,165	\$5,916	\$ 8,057
Consumer loans and leases as a percentage of outstanding consumer loans and leases <sup>(2)</sup>	1.41	% 1.80	% 1.31	% 1.77
Consumer loans and leases as a percentage of outstanding loans and leases, excluding PCI and fully-insured loan portfolios <sup>(2)</sup>	1.56	2.04	0.20	0.23

Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At September 30, 2016 and December 31, 2015, residential mortgage included \$3.3 billion and \$4.3 billion of loans on which interest has been curtailed by the FHA, and therefore are no longer accruing interest, although principal is still insured, and \$1.8 billion and \$2.9 billion of loans on which interest was still accruing.

Balances exclude consumer loans accounted for under the fair value option. At September 30, 2016 and December 31, 2015, \$222 million and \$293 million of loans accounted for under the fair value option were past due 90 days or more and not accruing interest.

n/a = not applicable

Table 26 presents net charge-offs and related ratios for consumer loans and leases.

Table 26  
Consumer Net Charge-offs and Related Ratios

(Dollars in millions)	Net Charge-offs <sup>(1)</sup>				Net Charge-off Ratios <sup>(1, 2)</sup>			
	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015		Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
	2016	2015	2016	2015	2016	2015	2016	2015

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Residential mortgage	\$4	\$26	\$129	\$400	0.01%	0.05%	0.09%	0.26%
Home equity	97	120	335	443	0.55	0.60	0.61	0.72
U.S. credit card	543	546	1,703	1,751	2.45	2.46	2.60	2.66
Non-U.S. credit card	43	47	134	142	1.83	1.83	1.84	1.88
Direct/Indirect consumer	34	25	91	83	0.14	0.12	0.13	0.13
Other consumer	57	57	152	139	9.74	11.21	9.09	9.72
Total	\$778	\$821	\$2,544	\$2,958	0.69	0.71	0.76	0.84

(1) Net charge-offs exclude write-offs in the PCI loan portfolio. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.

(2) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans and leases excluding loans accounted for under the fair value option.

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Net charge-off ratios, excluding the PCI and fully-insured loan portfolios, were 0.01 percent and 0.12 percent for residential mortgage, 0.58 percent and 0.65 percent for home equity, and 0.77 percent and 0.85 percent for the total consumer portfolio for the three and nine months ended September 30, 2016, respectively. Net charge-off ratios, excluding the PCI and fully-insured loan portfolios, were 0.08 percent and 0.39 percent for residential mortgage, 0.64 percent and 0.77 percent for home equity, and 0.82 percent and one percent for the total consumer portfolio for the three and nine months ended September 30, 2015, respectively. These are the only product classifications that include PCI and fully-insured loans.

Net charge-offs, as shown in Tables 26 and 27, exclude write-offs in the PCI loan portfolio of \$33 million and \$109 million in residential mortgage for the three and nine months ended September 30, 2016 compared to \$128 million and \$580 million for the same periods in 2015. Net charge-offs, as shown in Tables 26 and 27, exclude write-offs in the PCI loan portfolio of \$50 million and \$161 million in home equity for the three and nine months ended September 30, 2016 compared to \$20 million and \$146 million for the same periods in 2015. Net charge-off ratios including the PCI write-offs were 0.08 percent and 0.17 percent for residential mortgage for the three and nine months ended September 30, 2016 compared to 0.32 percent and 0.64 percent for the same periods in 2015. Net charge-off ratios including the PCI write-offs were 0.83 percent and 0.91 percent for home equity for the three and nine months ended September 30, 2016 compared to 0.70 percent and 0.96 percent for the same periods in 2015. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.

Table 27 presents outstandings, nonperforming balances, net charge-offs, allowance for loan and lease losses and provision for loan and lease losses for the core and non-core portfolio within the consumer real estate portfolio.

We categorize consumer real estate loans as core and non-core on the basis of loan and customer characteristics such as origination date, product type, LTV, FICO score and delinquency status consistent with our current consumer and mortgage servicing strategy. Generally, loans that were originated after January 1, 2010, qualified under government-sponsored enterprise underwriting guidelines, or otherwise met our underwriting guidelines in place in 2015 are characterized as core loans. Loans held in legacy private-label securitizations, government-insured loans originated prior to 2010, loan products no longer originated, and loans originated prior to 2010 and classified as nonperforming or modified in a TDR prior to 2016 are generally characterized as non-core loans, and are principally run-off portfolios. Core loans as reported within Table 27 include loans held in the Consumer Banking and GWIM segments, as well as loans held for ALM activities in All Other. For more information on core and non-core loans, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

As shown in Table 27, outstanding core consumer real estate loans increased \$4.7 billion during the nine months ended September 30, 2016 driven by an increase of \$8.7 billion in residential mortgage, partially offset by a \$4.0 billion decrease in home equity. The increase in residential mortgage was primarily driven by increased originations in Consumer Banking and GWIM. The decrease in home equity was driven by paydowns outpacing new originations and draws on existing lines.



operations and credit quality of the business. As a result, in the following discussions of the residential mortgage and home equity portfolios, we provide information that excludes the impact of the PCI loan portfolio, the fully-insured loan portfolio and loans accounted for under the fair value option in certain credit quality statistics. We separately disclose information on the PCI loan portfolio on page 62.

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## Residential Mortgage

The residential mortgage portfolio makes up the largest percentage of our consumer loan portfolio at 42 percent of consumer loans and leases at September 30, 2016. Approximately 40 percent of the residential mortgage portfolio is in All Other and is comprised of originated loans, purchased loans used in our overall ALM activities, delinquent FHA loans repurchased pursuant to our servicing agreements with GNMA as well as loans repurchased related to our representations and warranties. Approximately 33 percent of the residential mortgage portfolio is in GWIM and represents residential mortgages originated for the home purchase and refinancing needs of our wealth management clients and the remaining portion of the portfolio is primarily in Consumer Banking.

Outstanding balances in the residential mortgage portfolio, excluding loans accounted for under the fair value option, remained relatively unchanged at \$188.0 billion for the nine months ended September 30, 2016 compared to December 31, 2015 as retention of new originations was offset by loan sales of \$5.4 billion and runoff. Loan sales primarily included \$3.1 billion of loans in consolidated agency residential mortgage securitization vehicles and \$1.6 billion of nonperforming and other delinquent loans.

At September 30, 2016 and December 31, 2015, the residential mortgage portfolio included \$30.1 billion and \$37.1 billion of outstanding fully-insured loans. On this portion of the residential mortgage portfolio, we are protected against principal loss as a result of either FHA insurance or long-term standby agreements that provide for the transfer of credit risk to FNMA and FHLMC. At September 30, 2016 and December 31, 2015, \$24.1 billion and \$33.4 billion had FHA insurance with the remainder protected by long-term standby agreements. At September 30, 2016 and December 31, 2015, \$8.0 billion and \$11.2 billion of the FHA-insured loan population were repurchases of delinquent FHA loans pursuant to our servicing agreements with GNMA.

Table 28 presents certain residential mortgage key credit statistics on both a reported basis excluding loans accounted for under the fair value option, and excluding the PCI loan portfolio, our fully-insured loan portfolio and loans accounted for under the fair value option. Additionally, in the "Reported Basis" columns in the table below, accruing balances past due and nonperforming loans do not include the PCI loan portfolio, in accordance with our accounting policies, even though the customer may be contractually past due. As such, the following discussion presents the residential mortgage portfolio excluding the PCI loan portfolio, the fully-insured loan portfolio and loans accounted for under the fair value option. For more information on the PCI loan portfolio, see page 62.

Table 28  
Residential Mortgage – Key Credit Statistics

(Dollars in millions)	Reported Basis <sup>(1)</sup>		Excluding Purchased Credit-impaired and Fully-insured Loans		
	September 30 2016	December 31 2015	September 30 2016	December 31 2015	
Outstandings	\$ 187,968	\$ 187,911	\$ 147,294	\$ 138,768	
Accruing past due 30 days or more	8,295	11,423	1,451	1,568	
Accruing past due 90 days or more	5,117	7,150	—	—	
Nonperforming loans	3,341	4,803	3,341	4,803	
Percent of portfolio					
Refreshed LTV greater than 90 but less than or equal to 100	5	% 7	% 4	% 5	%
Refreshed LTV greater than 100	5	8	3	4	



Refreshed FICO score below 620	9	13	4	6
2006 and 2007 vintages <sup>(2)</sup>	15	17	13	17

	Reported Basis				Excluding Purchased Credit-impaired and Fully-insured Loans			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015	2016	2015	2016	2015
Net charge-off ratio <sup>(3)</sup>	0.01 %	0.05 %	0.09 %	0.26 %	0.01 %	0.08 %	0.12 %	0.39 %

(1) Outstandings, accruing past due, nonperforming loans and percentages of portfolio exclude loans accounted for under the fair value option.

These vintages of loans account for \$1.0 billion, or 31 percent, and \$1.6 billion, or 34 percent of nonperforming residential mortgage loans at September 30, 2016 and December 31, 2015. For the three and nine months ended

(2) September 30, 2016, these vintages accounted for \$6 million of recoveries and \$10 million, or eight percent of total residential mortgage net charge-offs. For the three and nine months ended September 30, 2015, these vintages accounted for \$4 million of recoveries, and \$114 million, or 29 percent of total residential mortgage net charge-offs.

(3) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans excluding loans accounted for under the fair value option.

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Nonperforming residential mortgage loans decreased \$1.5 billion during the nine months ended September 30, 2016 as outflows, including sales of \$1.2 billion, outpaced new inflows. Of the nonperforming residential mortgage loans at September 30, 2016, \$1.1 billion, or 32 percent, were current on contractual payments.

Net charge-offs decreased \$22 million to \$4 million and decreased \$271 million to \$129 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015. These decreases in net charge-offs were primarily driven by charge-offs related to the consumer relief portion of the settlement with the DoJ of \$49 million and \$379 million in the prior-year periods. Net charge-offs also included recoveries of \$7 million and charge-offs of \$35 million related to nonperforming loan sales during the three and nine months ended September 30, 2016 compared to recoveries of \$57 million and \$119 million for the same periods in 2015. Additionally, net charge-offs declined driven by favorable portfolio trends and decreased write-downs on loans greater than 180 days past due, which were written down to the estimated fair value of the collateral, less costs to sell, due in part to improvement in home prices and the U.S. economy.

Loans with a refreshed LTV greater than 100 percent represented three percent and four percent of the residential mortgage loan portfolio at September 30, 2016 and December 31, 2015. Of the loans with a refreshed LTV greater than 100 percent, 98 percent were performing at both September 30, 2016 and December 31, 2015. Loans with a refreshed LTV greater than 100 percent reflect loans where the outstanding carrying value of the loan is greater than the most recent valuation of the property securing the loan. The majority of these loans have a refreshed LTV greater than 100 percent primarily due to home price deterioration since 2006, partially offset by subsequent appreciation.

Of the \$147.3 billion in total residential mortgage loans outstanding at September 30, 2016, as shown in Table 29, 38 percent were originated as interest-only loans. The outstanding balance of interest-only residential mortgage loans that have entered the amortization period was \$11.1 billion, or 20 percent, at September 30, 2016. Residential mortgage loans that have entered the amortization period generally have experienced a higher rate of early stage delinquencies and nonperforming status compared to the residential mortgage portfolio as a whole. At September 30, 2016, \$219 million, or two percent of outstanding interest-only residential mortgages that had entered the amortization period were accruing past due 30 days or more compared to \$1.5 billion, or one percent for the entire residential mortgage portfolio. In addition, at September 30, 2016, \$535 million, or five percent of outstanding interest-only residential mortgage loans that had entered the amortization period were nonperforming, of which \$268 million were contractually current, compared to \$3.3 billion, or two percent for the entire residential mortgage portfolio, of which \$1.1 billion were contractually current. Loans that have yet to enter the amortization period in our interest-only residential mortgage portfolio are primarily well-collateralized loans to our wealth management clients and have an interest-only period of three to ten years. More than 80 percent of these loans that have yet to enter the amortization period will not be required to make a fully-amortizing payment until 2019 or later.

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Table 29 presents outstandings, nonperforming loans and net charge-offs by certain state concentrations for the residential mortgage portfolio. The Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area (MSA) within California represented 15 percent and 14 percent of outstandings at September 30, 2016 and December 31, 2015. For the three and nine months ended September 30, 2016, loans within this MSA contributed net recoveries of \$5 million and \$6 million within the residential mortgage portfolio compared to net recoveries of \$6 million and \$10 million for the same periods in 2015. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 12 percent and 11 percent of outstandings at September 30, 2016 and December 31, 2015. For the three and nine months ended September 30, 2016, loans within this MSA contributed net charge-offs of \$4 million and \$31 million within the residential mortgage portfolio compared to net charge-offs of \$13 million and \$86 million for the same periods in 2015.

Table 29  
Residential Mortgage State Concentrations

	Outstandings <sup>(1)</sup>		Nonperforming <sup>(1)</sup>		Net Charge-offs <sup>(2)</sup>			
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
(Dollars in millions)					2016	2015	2016	2015
California	\$55,236	\$ 48,865	\$638	\$ 977	\$(21)	\$(30)	\$(51)	\$(37)
New York <sup>(3)</sup>	13,707	12,696	324	399	(1)	11	17	46
Florida <sup>(3)</sup>	10,051	10,001	351	534	2	5	19	51
Texas	6,401	6,208	144	185	—	—	8	9
Massachusetts	5,115	4,799	84	118	—	—	4	6
Other U.S./Non-U.S.	56,784	56,199	1,800	2,590	24	40	132	325
Residential mortgage loans <sup>(4)</sup>	\$147,294	\$138,768	\$3,341	\$ 4,803	\$4	\$26	\$129	\$400
Fully-insured loan portfolio	30,060	37,077						
Purchased credit-impaired residential mortgage loan portfolio <sup>(5)</sup>	10,614	12,066						
Total residential mortgage loan portfolio	\$187,968	\$187,911						

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.

(2) Net charge-offs exclude \$33 million and \$109 million of write-offs in the residential mortgage PCI loan portfolio for the three and nine months ended September 30, 2016 compared to \$128 million and \$580 million for the same periods in 2015. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.

(3) In these states, foreclosure requires a court order following a legal proceeding (judicial states).

(4) Amounts exclude the PCI residential mortgage and fully-insured loan portfolios.

(5) At September 30, 2016 and December 31, 2015, 48 percent and 47 percent of PCI residential mortgage loans were in California. There were no other significant single state concentrations.

## Home Equity

At September 30, 2016, the home equity portfolio made up 15 percent of the consumer portfolio and is comprised of home equity lines of credit (HELOCs), home equity loans and reverse mortgages.

At September 30, 2016, our HELOC portfolio had an outstanding balance of \$60.4 billion, or 87 percent of the total home equity portfolio compared to \$66.1 billion, or 87 percent, at December 31, 2015. HELOCs generally have an

initial draw period of 10 years and the borrowers typically are only required to pay the interest due on the loans on a monthly basis. After the initial draw period ends, the loans generally convert to 15-year amortizing loans.

At September 30, 2016, our home equity loan portfolio had an outstanding balance of \$6.6 billion, or 10 percent of the total home equity portfolio compared to \$7.9 billion, or 10 percent, at December 31, 2015. Home equity loans are almost all fixed-rate loans with amortizing payment terms of 10 to 30 years and of the \$6.6 billion at September 30, 2016, 55 percent have 25- to 30-year terms. At both September 30, 2016 and December 31, 2015, our reverse mortgage portfolio had an outstanding balance, excluding loans accounted for under the fair value option, of \$2.0 billion, or three percent of the total home equity portfolio. We no longer originate reverse mortgages.

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At September 30, 2016, approximately 67 percent of the home equity portfolio was included in Consumer Banking, 26 percent was included in All Other and the remainder of the portfolio was primarily in GWIM. Outstanding balances in the home equity portfolio, excluding loans accounted for under the fair value option, decreased \$7.0 billion during the nine months ended September 30, 2016 primarily due to paydowns and charge-offs outpacing new originations and draws on existing lines. Of the total home equity portfolio at September 30, 2016 and December 31, 2015, \$19.9 billion and \$20.3 billion, or 29 percent and 27 percent, were in first-lien positions (30 percent and 28 percent excluding the PCI home equity portfolio). At September 30, 2016, outstanding balances in the home equity portfolio that were in a second-lien or more junior-lien position and where we also held the first-lien loan totaled \$11.4 billion, or 18 percent of our total home equity portfolio excluding the PCI loan portfolio.

Unused HELOCs totaled \$47.7 billion at September 30, 2016 compared to \$50.3 billion at December 31, 2015. The decrease was primarily due to accounts reaching the end of their draw period, which automatically eliminates open line exposure, as well as customers choosing to close accounts. Both of these more than offset customer paydowns of principal balances and the impact of new production. The HELOC utilization rate was 56 percent at September 30, 2016 compared to 57 percent at December 31, 2015.

Table 30 presents certain home equity portfolio key credit statistics on both a reported basis excluding loans accounted for under the fair value option, and excluding the PCI loan portfolio and loans accounted for under the fair value option. Additionally, in the "Reported Basis" columns in the table below, accruing balances past due 30 days or more and nonperforming loans do not include the PCI loan portfolio, in accordance with our accounting policies, even though the customer may be contractually past due. As such, the following discussion presents the home equity portfolio excluding the PCI loan portfolio and loans accounted for under the fair value option. For more information on the PCI loan portfolio, see page 62.

Table 30  
Home Equity – Key Credit Statistics

(Dollars in millions)	Reported Basis <sup>(1)</sup>		Excluding Purchased Credit-impaired Loans	
	September 30 2016	December 31 2015	September 30 2016	December 31 2015
Outstandings	\$68,997	\$ 75,948	\$65,143	\$ 71,329
Accruing past due 30 days or more <sup>(2)</sup>	565	613	565	613
Nonperforming loans <sup>(2)</sup>	2,982	3,337	2,982	3,337
Percent of portfolio				
Refreshed CLTV greater than 90 but less than or equal to 100	6	% 6	% 5	% 6
Refreshed CLTV greater than 100	10	12	8	11
Refreshed FICO score below 620	7	7	6	7
2006 and 2007 vintages <sup>(3)</sup>	39	43	36	41

	Reported Basis				Excluding Purchased Credit-impaired Loans				
	Three Months Ended		Nine Months Ended		Three Months Ended		Nine Months Ended		
	September 30		September 30		September 30		September 30		
	2016	2015	2016	2015	2016	2015	2016	2015	
Net charge-off ratio <sup>(4)</sup>	0.55%	0.60%	0.61%	0.72%	0.58	% 0.64	% 0.65	% 0.77	%

<sup>(1)</sup> Outstandings, accruing past due, nonperforming loans and percentages of the portfolio exclude loans accounted for under the fair value option.

<sup>(2)</sup>

Accruing past due 30 days or more includes \$74 million and \$89 million and nonperforming loans include \$350 million and \$396 million of loans where we serviced the underlying first-lien at September 30, 2016 and December 31, 2015.

(3) These vintages of loans have higher refreshed combined LTV ratios and accounted for 48 percent and 45 percent of nonperforming home equity loans at September 30, 2016 and December 31, 2015, and 57 percent and 47 percent of net charge-offs for the three and nine months ended September 30, 2016 and 52 percent and 56 percent for the three and nine months ended September 30, 2015.

(4) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans excluding loans accounted for under the fair value option.

Nonperforming outstanding balances in the home equity portfolio decreased \$355 million during the nine months ended September 30, 2016 as outflows, including sales of \$163 million, outpaced new inflows. Of the nonperforming home equity portfolio at September 30, 2016, \$1.5 billion, or 49 percent, were current on contractual payments.

Nonperforming loans that are contractually current primarily consist of collateral-dependent TDRs, including those that have been discharged in Chapter 7 bankruptcy, junior-lien loans where the underlying first-lien is 90 days or more past due, as well as loans that have not yet demonstrated a sustained period of payment performance following a TDR. In addition, \$950 million, or 32 percent of nonperforming home equity loans were 180 days or more past due and had been written down to the estimated fair value of the collateral, less costs to sell. Accruing loans that were 30 days or more past due decreased \$48 million during the nine months ended September 30, 2016.

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In some cases, the junior-lien home equity outstanding balance that we hold is performing, but the underlying first-lien is not. For outstanding balances in the home equity portfolio on which we service the first-lien loan, we are able to track whether the first-lien loan is in default. For loans where the first-lien is serviced by a third party, we utilize credit bureau data to estimate the delinquency status of the first-lien. Given that the credit bureau database we use does not include a property address for the mortgages, we are unable to identify with certainty whether a reported delinquent first-lien mortgage pertains to the same property for which we hold a junior-lien loan. For certain loans, we utilize a third-party vendor to combine credit bureau and public record data to better link a junior-lien loan with the underlying first-lien mortgage. At September 30, 2016, we estimate that \$991 million of current and \$144 million of 30 to 89 days past due junior-lien loans were behind a delinquent first-lien loan. We service the first-lien loans on \$168 million of these combined amounts, with the remaining \$967 million serviced by third parties. Of the \$1.1 billion of current to 89 days past due junior-lien loans, based on available credit bureau data and our own internal servicing data, we estimate that approximately \$432 million had first-lien loans that were 90 days or more past due.

Net charge-offs decreased \$23 million to \$97 million and decreased \$108 million to \$335 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015. These decreases in net charge-offs were partly attributable to charge-offs of \$4 million and \$70 million related to the consumer relief portion of the settlement with the DoJ in the prior-year periods. Additionally, net charge-offs declined driven by favorable portfolio trends due in part to improvement in home prices and the U.S. economy.

Outstanding balances with a refreshed combined loan-to-value (CLTV) greater than 100 percent comprised eight percent and 11 percent of the home equity portfolio at September 30, 2016 and December 31, 2015. Outstanding balances in the home equity portfolio with a refreshed CLTV greater than 100 percent reflect loans where our loan and available line of credit combined with any outstanding senior liens against the property are equal to or greater than the most recent valuation of the property securing the loan. Depending on the value of the property, there may be collateral in excess of the first-lien that is available to reduce the severity of loss on the second-lien. Of those outstanding balances with a refreshed CLTV greater than 100 percent, 96 percent of the customers were current on their home equity loan and 92 percent of second-lien loans with a refreshed CLTV greater than 100 percent were current on both their second-lien and underlying first-lien loans at September 30, 2016.

Of the \$65.1 billion in total home equity portfolio outstandings at September 30, 2016, as shown in Table 31, 56 percent require interest-only payments. The outstanding balance of HELOCs that have entered the amortization period was \$13.6 billion at September 30, 2016. The HELOCs that have entered the amortization period have experienced a higher percentage of early stage delinquencies and nonperforming status when compared to the HELOC portfolio as a whole. At September 30, 2016, \$277 million, or two percent of outstanding HELOCs that had entered the amortization period were accruing past due 30 days or more. In addition, at September 30, 2016, \$1.7 billion, or 12 percent of outstanding HELOCs that had entered the amortization period were nonperforming, of which \$802 million were contractually current. Loans in our HELOC portfolio generally have an initial draw period of 10 years and 28 percent of these loans will enter the amortization period in the remainder of 2016 and 2017 and will be required to make fully-amortizing payments. We communicate to contractually current customers more than a year prior to the end of their draw period to inform them of the potential change to the payment structure before entering the amortization period, and provide payment options to customers prior to the end of the draw period.

Although we do not actively track how many of our home equity customers pay only the minimum amount due on their home equity loans and lines, we can infer some of this information through a review of our HELOC portfolio that we service and that is still in its revolving period (i.e., customers may draw on and repay their line of credit, but are generally only required to pay interest on a monthly basis). During the three months ended September 30, 2016, approximately 45 percent of these customers with an outstanding balance did not pay any principal on their HELOCs.





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Table 31 presents outstandings, nonperforming balances and net charge-offs by certain state concentrations for the home equity portfolio. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 13 percent of the outstanding home equity portfolio at both September 30, 2016 and December 31, 2015. For the three and nine months ended September 30, 2016, loans within this MSA contributed 15 percent and 16 percent of net charge-offs within the home equity portfolio compared to 11 percent and 13 percent of net charge-offs for the same periods in 2015. The Los Angeles-Long Beach-Santa Ana MSA within California made up 11 percent and 12 percent of the outstanding home equity portfolio at September 30, 2016 and December 31, 2015. For both the three and nine months ended September 30, 2016, loans within this MSA contributed zero percent of net charge-offs within the home equity portfolio compared to zero percent and two percent of net charge-offs for the same periods in 2015.

Table 31  
Home Equity State Concentrations

	Outstandings <sup>(1)</sup>		Nonperforming <sup>(1)</sup>		Net Charge-offs <sup>(2)</sup>			
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
(Dollars in millions)								
California	\$18,361	\$ 20,356	\$848	\$ 902	\$3	\$7	\$12	\$44
Florida <sup>(3)</sup>	7,585	8,474	449	518	18	27	59	89
New Jersey <sup>(3)</sup>	5,246	5,570	204	230	12	11	37	36
New York <sup>(3)</sup>	4,847	5,249	274	316	11	9	37	34
Massachusetts	3,185	3,378	104	115	2	2	10	11
Other U.S./Non-U.S.	25,919	28,302	1,103	1,256	51	64	180	229
Home equity loans <sup>(4)</sup>	\$65,143	\$ 71,329	\$2,982	\$ 3,337	\$97	\$120	\$335	\$443
Purchased credit-impaired home equity portfolio <sup>(5)</sup>	3,854	4,619						
Total home equity loan portfolio	\$68,997	\$ 75,948						

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.

(2) Net charge-offs exclude \$50 million and \$161 million of write-offs in the home equity PCI loan portfolio for the three and nine months ended September 30, 2016 compared to \$20 million and \$146 million for the same periods in 2015. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.

(3) In these states, foreclosure requires a court order following a legal proceeding (judicial states).

(4) Amount excludes the PCI home equity portfolio.

(5) At both September 30, 2016 and December 31, 2015, 29 percent of PCI home equity loans were in California. There were no other significant single state concentrations.

#### Purchased Credit-impaired Loan Portfolio

Loans acquired with evidence of credit quality deterioration since origination and for which it is probable at purchase that we will be unable to collect all contractually required payments are accounted for under the accounting guidance for PCI loans, which addresses accounting for differences between contractual and expected cash flows to be collected from the purchaser's initial investment in loans if those differences are attributable, at least in part, to credit quality. For more information on PCI loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.



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Table 32 presents the unpaid principal balance, carrying value, related valuation allowance and the net carrying value as a percentage of the unpaid principal balance for the PCI loan portfolio.

Table 32

## Purchased Credit-impaired Loan Portfolio

(Dollars in millions)	September 30, 2016				
	Unpaid Principal Balance	Gross Carrying Value	Related Valuation Allowance	Carrying Value Net of Valuation Allowance	Percent of Unpaid Principal Balance
Residential mortgage	\$ 10,832	\$ 10,614	\$ 191	\$ 10,423	96.22 %
Home equity	3,930	3,854	262	3,592	91.40
Total purchased credit-impaired loan portfolio	\$ 14,762	\$ 14,468	\$ 453	\$ 14,015	94.94
	December 31, 2015				
Residential mortgage	\$ 12,350	\$ 12,066	\$ 338	\$ 11,728	94.96 %
Home equity	4,650	4,619	466	4,153	89.31
Total purchased credit-impaired loan portfolio	\$ 17,000	\$ 16,685	\$ 804	\$ 15,881	93.42

The total PCI unpaid principal balance decreased \$2.2 billion, or 13 percent, during the nine months ended September 30, 2016 primarily driven by payoffs, sales, paydowns and write-offs. During the nine months ended September 30, 2016, we sold PCI loans with a carrying value of \$435 million compared to sales of \$1.2 billion for the same period in 2015.

Of the unpaid principal balance of \$14.8 billion at September 30, 2016, \$13.0 billion, or 88 percent, was current based on the contractual terms, \$959 million, or six percent, was in early stage delinquency, and \$587 million was 180 days or more past due, including \$509 million of first-lien mortgages and \$78 million of home equity loans.

During the nine months ended September 30, 2016, we recorded a provision benefit of \$81 million for the PCI loan portfolio which included a benefit of \$43 million for home equity and \$38 million for residential mortgage. This compared to a total provision benefit of \$68 million and \$40 million for the three and nine months ended September 30, 2015. The provision benefit for the nine months ended September 30, 2016 was primarily driven by lower default estimates on second-lien loans and continued home price improvement.

The PCI valuation allowance declined \$351 million during the nine months ended September 30, 2016 due to write-offs in the PCI loan portfolio of \$109 million in residential mortgage and \$161 million in home equity, combined with a provision benefit of \$81 million.

## Purchased Credit-impaired Residential Mortgage Loan Portfolio

The PCI residential mortgage loan portfolio represented 73 percent of the total PCI loan portfolio at September 30, 2016. Those loans to borrowers with a refreshed FICO score below 620 represented 28 percent of the PCI residential mortgage loan portfolio at September 30, 2016. Loans with a refreshed LTV greater than 90 percent, after consideration of purchase accounting adjustments and the related valuation allowance, represented 25 percent of the PCI residential mortgage loan portfolio and 28 percent based on the unpaid principal balance at September 30, 2016.

Pay option adjustable-rate mortgages, which are included in the PCI residential mortgage portfolio, have interest rates that adjust monthly and minimum required payments that adjust annually. During an initial five- or ten-year period,

minimum required payments may increase by no more than 7.5 percent. If payments are insufficient to pay all of the monthly interest charges, unpaid interest is added to the loan balance (i.e., negative amortization) until the loan balance increases to a specified limit at which time a new monthly payment amount adequate to repay the loan over its remaining contractual life is established.

At September 30, 2016, the unpaid principal balance of pay option loans was \$2.0 billion, with a carrying value of \$1.9 billion. This includes \$1.7 billion of loans that were credit-impaired upon acquisition and \$223 million of loans that are 90 days or more past due. The total unpaid principal balance of pay option loans with accumulated negative amortization was \$341 million, including \$18 million of negative amortization. We believe the majority of borrowers that are now making scheduled payments are able to do so primarily because the low rate environment has caused the fully indexed rates to be affordable to more borrowers. We continue to evaluate our exposure to payment resets on the acquired negative-amortizing loans and have taken into consideration several assumptions including prepayment and default rates.

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## Purchased Credit-impaired Home Equity Loan Portfolio

The PCI home equity portfolio represented 27 percent of the total PCI loan portfolio at September 30, 2016. Those loans with a refreshed FICO score below 620 represented 15 percent of the PCI home equity portfolio at September 30, 2016. Loans with a refreshed CLTV greater than 90 percent, after consideration of purchase accounting adjustments and the related valuation allowance, represented 52 percent of the PCI home equity portfolio and 55 percent based on the unpaid principal balance at September 30, 2016.

## U.S. Credit Card

At September 30, 2016, 97 percent of the U.S. credit card portfolio was managed in Consumer Banking with the remainder in GWIM. Outstandings in the U.S. credit card portfolio decreased \$813 million during the nine months ended September 30, 2016 due to a seasonal decline in retail transaction volume. Net charge-offs decreased \$3 million to \$543 million and \$48 million to \$1.7 billion during the three and nine months ended September 30, 2016 compared to the same periods in 2015 due to improvements in delinquencies and bankruptcies as a result of an improved economic environment and the impact of higher credit quality originations. During the nine months ended September 30, 2016, U.S. credit card loans 30 days or more past due and still accruing interest decreased \$116 million to \$1.5 billion, and loans 90 days or more past due and still accruing interest decreased \$87 million to \$702 million at September 30, 2016 as a result of the factors mentioned above that contributed to lower net charge-offs.

Unused lines of credit for U.S. credit card totaled \$323.9 billion and \$312.5 billion at September 30, 2016 and December 31, 2015. The \$11.4 billion increase was driven by account growth and lines of credit increases.

Table 33 presents certain state concentrations for the U.S. credit card portfolio.

Table 33

## U.S. Credit Card State Concentrations

	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)					2016	2015	2016	2015
California	\$13,651	\$13,658	\$106	\$115	\$86	\$85	\$269	\$269
Florida	7,467	7,420	74	81	60	58	184	186
Texas	6,737	6,620	56	58	40	37	122	117
New York	5,507	5,547	52	57	39	38	120	121
Washington	3,944	3,907	18	19	13	13	42	45
Other U.S.	51,483	52,450	396	459	305	315	966	1,013
Total U.S. credit card portfolio	\$88,789	\$89,602	\$702	\$789	\$543	\$546	\$1,703	\$1,751

## Non-U.S. Credit Card

Outstandings in the non-U.S. credit card portfolio, which are recorded in All Other, decreased \$717 million during the nine months ended September 30, 2016 primarily driven by weakening of the British Pound against the U.S. Dollar. For the three and nine months ended September 30, 2016, net charge-offs decreased \$4 million to \$43 million and \$8 million to \$134 million compared to the same periods in 2015. During the nine months ended September 30, 2016,

non-U.S. credit card loans 30 days or more past due and still accruing interest decreased \$21 million to \$125 million, and loans 90 days or more past due and still accruing interest decreased \$11 million to \$65 million at September 30, 2016.

Unused lines of credit for non-U.S. credit card totaled \$25.5 billion and \$27.9 billion at September 30, 2016 and December 31, 2015. The \$2.4 billion decrease was driven by weakening of the British Pound against the U.S. Dollar, partially offset by account growth and increases in lines of credit.

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## Direct/Indirect Consumer

At September 30, 2016, approximately 52 percent of the direct/indirect portfolio was included in Consumer Banking (consumer auto and specialty lending – automotive, marine, aircraft, recreational vehicle loans, and consumer personal loans), 47 percent was included in GWIM (principally securities-based lending loans) and the remainder was primarily student loans in All Other.

Outstandings in the direct/indirect portfolio increased \$4.5 billion during the nine months ended September 30, 2016 primarily in the consumer auto loan portfolio, partially offset by lower outstandings in the securities-based lending and the unsecured consumer lending portfolios.

Table 34 presents certain state concentrations for the direct/indirect consumer loan portfolio.

Table 34

## Direct/Indirect State Concentrations

	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
					Three Months Ended		Nine Months Ended	
	September 2016	December 31 2015	September 2016	December 31 2015	September 30 2016	September 30 2015	September 30 2016	September 30 2015
(Dollars in millions)								
California	\$ 11,231	\$ 10,735	\$ 3	\$ 3	\$ 4	\$ 1	\$ 9	\$ 5
Texas	9,334	8,514	3	4	6	4	14	12
Florida	9,036	8,835	3	3	7	6	20	14
New York	5,341	5,077	1	1	—	1	1	2
Georgia	3,095	2,869	4	4	4	1	7	5
Other U.S./Non-U.S.	55,257	52,765	15	24	13	12	40	45
Total direct/indirect loan portfolio	\$ 93,294	\$ 88,795	\$ 29	\$ 39	\$ 34	\$ 25	\$ 91	\$ 83

## Other Consumer

At September 30, 2016, approximately 73 percent of the \$2.4 billion other consumer portfolio was consumer auto leases included in Consumer Banking. The remainder is primarily associated with certain consumer finance businesses that we previously exited.

## Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

Table 35 presents nonperforming consumer loans, leases and foreclosed properties activity for the three and nine months ended September 30, 2016 and 2015. For more information on nonperforming loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K. During the nine months ended September 30, 2016, nonperforming consumer loans declined \$1.8 billion to \$6.4 billion primarily driven by loan sales of \$1.3 billion. Excluding these sales, nonperforming loans declined as outflows outpaced new inflows.

The outstanding balance of a real estate-secured loan that is in excess of the estimated property value less costs to sell is charged off no later than the end of the month in which the loan becomes 180 days past due unless repayment of the loan is fully insured. At September 30, 2016, \$2.8 billion, or 42 percent of nonperforming consumer real estate loans

and foreclosed properties had been written down to their estimated property value less costs to sell, including \$2.4 billion of nonperforming loans 180 days or more past due and \$372 million of foreclosed properties. In addition, at September 30, 2016, \$2.5 billion, or 38 percent of nonperforming consumer loans were modified and are now current after successful trial periods, or are current loans classified as nonperforming loans in accordance with applicable policies.

Foreclosed properties decreased \$72 million during the nine months ended September 30, 2016 as liquidations outpaced additions. PCI loans are excluded from nonperforming loans as these loans were written down to fair value at the acquisition date; however, once the underlying real estate is acquired by the Corporation upon foreclosure of the delinquent PCI loan, it is included in foreclosed properties. PCI-related foreclosed properties decreased \$72 million during the nine months ended September 30, 2016. Not included in foreclosed properties at September 30, 2016 was \$1.3 billion of real estate that was acquired upon foreclosure of certain delinquent government-guaranteed loans (principally FHA-insured loans). We exclude these amounts from our nonperforming loans and foreclosed properties activity as we expect we will be reimbursed once the property is conveyed to the guarantor for principal and, up to certain limits, costs incurred during the foreclosure process and interest incurred during the holding period.



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Nonperforming loans also include certain loans that have been modified in TDRs where economic concessions have been granted to borrowers experiencing financial difficulties. These concessions typically result from the Corporation's loss mitigation activities and could include reductions in the interest rate, payment extensions, forgiveness of principal, forbearance or other actions. Certain TDRs are classified as nonperforming at the time of restructuring and may only be returned to performing status after considering the borrower's sustained repayment performance for a reasonable period, generally six months. Nonperforming TDRs, excluding those modified loans in the PCI loan portfolio, are included in Table 35.

Table 35

Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity <sup>(1)</sup>

	Three Months		Nine Months	
	Ended		Ended	
(Dollars in millions)	September 30		September 30	
	2016	2015	2016	2015
Nonperforming loans and leases, beginning of period	\$6,705	\$9,575	\$8,165	\$10,819
Additions to nonperforming loans and leases:				
New nonperforming loans and leases	831	1,029	2,581	3,922
Reductions to nonperforming loans and leases:				
Paydowns and payoffs	(220 )	(262 )	(605 )	(804 )
Sales	(237 )	(447 )	(1,331 )	(1,360 )
Returns to performing status <sup>(2)</sup>	(383 )	(722 )	(1,220 )	(2,220 )
Charge-offs	(279 )	(375 )	(1,008 )	(1,319 )
Transfers to foreclosed properties <sup>(3)</sup>	(67 )	(101 )	(232 )	(341 )
Total net reductions to nonperforming loans and leases	(355 )	(878 )	(1,815 )	(2,122 )
Total nonperforming loans and leases, September 30 <sup>(4)</sup>	6,350	8,697	6,350	8,697
Foreclosed properties, beginning of period	416	553	444	630
Additions to foreclosed properties:				
New foreclosed properties <sup>(3)</sup>	88	132	328	485
Reductions to foreclosed properties:				
Sales	(114 )	(182 )	(350 )	(552 )
Write-downs	(18 )	(24 )	(50 )	(84 )
Total net reductions to foreclosed properties	(44 )	(74 )	(72 )	(151 )
Total foreclosed properties, September 30 <sup>(5)</sup>	372	479	372	479
Nonperforming consumer loans, leases and foreclosed properties, September 30	\$6,722	\$9,176	\$6,722	\$9,176
Nonperforming consumer loans and leases as a percentage of outstanding consumer loans and leases <sup>(6)</sup>	1.41	% 1.92	%	
Nonperforming consumer loans, leases and foreclosed properties as a percentage of outstanding consumer loans, leases and foreclosed properties <sup>(6)</sup>	1.49	2.02		

Balances do not include nonperforming LHFS of \$12 million and \$8 million and nonaccruing TDRs removed from the PCI loan portfolio prior to January 1, 2010 of \$27 million and \$49 million at September 30, 2016 and 2015 as well as loans accruing past due 90 days or more as presented in Table 25 and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Consumer loans may be returned to performing status when all principal and interest is current and full repayment of the remaining contractual principal and interest is expected, or when the loan otherwise becomes well-secured and is in the process of collection.

New foreclosed properties represents transfers of nonperforming loans to foreclosed properties net of charge-offs taken during the first 90 days after transfer of a loan to foreclosed properties. New foreclosed properties also includes properties obtained upon foreclosure of delinquent PCI loans, properties repurchased due to

representations and warranties exposure and properties acquired with newly consolidated subsidiaries.

- (4) At September 30, 2016, 38 percent of nonperforming loans were 180 days or more past due.
- (5) Foreclosed property balances do not include properties insured by certain government-guaranteed loans, principally FHA-insured loans, of \$1.3 billion at both September 30, 2016 and 2015.
- (6) Outstanding consumer loans and leases exclude loans accounted for under the fair value option.

Our policy is to record any losses in the value of foreclosed properties as a reduction in the allowance for loan and lease losses during the first 90 days after transfer of a loan to foreclosed properties. Thereafter, further losses in value as well as gains and losses on sale are recorded in noninterest expense. New foreclosed properties included in Table 35 are net of \$18 million and \$60 million of charge-offs and write-offs of PCI loans for the three and nine months ended September 30, 2016 compared to \$51 million and \$127 million for the same periods in 2015, recorded during the first 90 days after transfer.

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We classify junior-lien home equity loans as nonperforming when the first-lien loan becomes 90 days past due even if the junior-lien loan is performing. At September 30, 2016 and December 31, 2015, \$432 million and \$484 million of such junior-lien home equity loans were included in nonperforming loans and leases.

Table 36 presents TDRs for the consumer real estate portfolio. Performing TDR balances are excluded from nonperforming loans and leases in Table 35.

Table 36

## Consumer Real Estate Troubled Debt Restructurings

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Total	Nonperforming	Performing	Total	Nonperforming	Performing
Residential mortgage <sup>(1, 2)</sup>	\$13,704	\$ 2,199	\$ 11,505	\$18,372	\$ 3,284	\$ 15,088
Home equity <sup>(3)</sup>	2,803	1,606	1,197	2,686	1,649	1,037
Total consumer real estate troubled debt restructurings	\$16,507	\$ 3,805	\$ 12,702	\$21,058	\$ 4,933	\$ 16,125

Residential mortgage TDRs deemed collateral dependent totaled \$3.7 billion and \$4.9 billion, and included \$1.7 billion and \$2.7 billion of loans classified as nonperforming and \$2.0 billion and \$2.2 billion of loans classified as performing at September 30, 2016 and December 31, 2015.

<sup>(2)</sup> Residential mortgage performing TDRs included \$5.9 billion and \$8.7 billion of loans that were fully-insured at September 30, 2016 and December 31, 2015.

<sup>(3)</sup> Home equity TDRs deemed collateral dependent totaled \$1.7 billion and \$1.6 billion, and included \$1.3 billion of loans classified as nonperforming at both September 30, 2016 and December 31, 2015. Loans classified as performing totaled \$303 million and \$290 million at September 30, 2016 and December 31, 2015.

In addition to modifying consumer real estate loans, we work with customers who are experiencing financial difficulty by modifying credit card and other consumer loans. Credit card and other consumer loan modifications generally involve a reduction in the customer's interest rate on the account and placing the customer on a fixed payment plan not exceeding 60 months, all of which are considered TDRs (the renegotiated TDR portfolio). In addition, the accounts of non-U.S. credit card customers who do not qualify for a fixed payment plan may have their interest rates reduced, as required by certain local jurisdictions. These modifications, which are also TDRs, tend to experience higher payment default rates given that the borrowers may lack the ability to repay even with the interest rate reduction. In all cases, the customer's available line of credit is canceled.

Modifications of credit card and other consumer loans are primarily made through internal renegotiation programs utilizing direct customer contact, but may also utilize external renegotiation programs. The renegotiated TDR portfolio is excluded in large part from Table 35 as substantially all of the loans remain on accrual status until either charged off or paid in full. At September 30, 2016 and December 31, 2015, our renegotiated TDR portfolio was \$637 million and \$779 million, of which \$520 million and \$635 million were current or less than 30 days past due under the modified terms. The decline in the renegotiated TDR portfolio was primarily driven by paydowns and charge-offs as well as lower program enrollments. For more information on the renegotiated TDR portfolio, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

## Commercial Portfolio Credit Risk Management

Commercial credit risk is evaluated and managed with the goal that concentrations of credit exposure do not result in undesirable levels of risk. We review, measure and manage concentrations of credit exposure by industry, product, geography, customer relationship and loan size. We also review, measure and manage commercial real estate loans by geographic location and property type. In addition, within our non-U.S. portfolio, we evaluate exposures by region and by country. Tables 41, 44 and 49 summarize our concentrations. We also utilize syndications of exposure to third

parties, loan sales, hedging and other risk mitigation techniques to manage the size and risk profile of the commercial credit portfolio. For more information on our industry concentrations, including our utilized exposure to the energy sector which was four percent of total commercial utilized exposure at both September 30, 2016 and December 31, 2015, see Commercial Portfolio Credit Risk Management – Industry Concentrations on page 74 and Table 44.

For more information on our accounting policies regarding delinquencies, nonperforming status and net charge-offs for the commercial portfolio, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

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## Commercial Credit Portfolio

During the nine months ended September 30, 2016, other than in the higher risk energy sub-sectors, credit quality among large corporate borrowers was strong. While we experienced some deterioration in the energy sector in the three months ended March 31, 2016, oil prices have stabilized which contributed to a modest improvement in energy-related exposure. Credit quality of commercial real estate borrowers continued to be strong with conservative loan-to-value ratios, stable market rents in most sectors and vacancy rates remaining low.

Outstanding commercial loans and leases increased \$11.7 billion during the nine months ended September 30, 2016, primarily in U.S. commercial. Nonperforming commercial loans and leases increased \$845 million during the nine months ended September 30, 2016. Nonperforming commercial loans and leases as a percentage of outstanding loans and leases, excluding loans accounted for under the fair value option, increased during the nine months ended September 30, 2016 to 0.45 percent from 0.28 percent at December 31, 2015. Reservable criticized balances increased \$1.0 billion to \$16.9 billion during the nine months ended September 30, 2016 as a result of net downgrades outpacing paydowns, primarily in the energy sector. The increase in nonperforming loans was primarily due to energy and metals and mining exposure. The allowance for loan and lease losses for the commercial portfolio increased \$464 million to \$5.3 billion at September 30, 2016 compared to December 31, 2015. For additional information, see Allowance for Credit Losses on page 80.

Table 37 presents our commercial loans and leases portfolio, and related credit quality information at September 30, 2016 and December 31, 2015.

Table 37

## Commercial Loans and Leases

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015
(Dollars in millions)						
U.S. commercial	\$267,019	\$ 252,771	\$ 1,439	\$ 867	\$ 40	\$ 113
Commercial real estate <sup>(1)</sup>	57,303	57,199	60	93	—	3
Commercial lease financing	21,309	21,352	35	12	28	15
Non-U.S. commercial	87,497	91,549	400	158	3	1
	433,128	422,871	1,934	1,130	71	132
U.S. small business commercial <sup>(2)</sup>	13,077	12,876	65	82	63	61
Commercial loans excluding loans accounted for under the fair value option	446,205	435,747	1,999	1,212	134	193
Loans accounted for under the fair value option <sup>(3)</sup>	6,340	5,067	71	13	—	—
Total commercial loans and leases	\$452,545	\$ 440,814	\$2,070	\$ 1,225	\$ 134	\$ 193

<sup>(1)</sup> Includes U.S. commercial real estate loans of \$53.9 billion and \$53.6 billion and non-U.S. commercial real estate loans of \$3.4 billion and \$3.5 billion at September 30, 2016 and December 31, 2015.

<sup>(2)</sup> Includes card-related products.

<sup>(3)</sup> Commercial loans accounted for under the fair value option include U.S. commercial loans of \$2.6 billion and \$2.3 billion and non-U.S. commercial loans of \$3.7 billion and \$2.8 billion at September 30, 2016 and December 31, 2015. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.



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Table 38 presents net charge-offs and related ratios for our commercial loans and leases for the three and nine months ended September 30, 2016 and 2015. The increase in net charge-offs of \$161 million for the nine months ended September 30, 2016 compared to the same period in 2015 was primarily due to higher energy sector related losses.

Table 38

## Commercial Net Charge-offs and Related Ratios

	Net Charge-offs				Net Charge-off Ratios <sup>(1)</sup>			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015	2016	2015	2016	2015
(Dollars in millions)	2016	2015	2016	2015	2016	2015	2016	2015
U.S. commercial	\$62	\$52	\$155	\$58	0.10 %	0.09 %	0.08 %	0.03 %
Commercial real estate	(23 )	(10 )	(31 )	(9 )	(0.16)	(0.08)	(0.07)	(0.02)
Commercial lease financing	6	3	19	8	0.11	0.07	0.12	0.06
Non-U.S. commercial	10	9	97	9	0.04	0.04	0.14	0.01
	55	54	240	66	0.05	0.05	0.08	0.02
U.S. small business commercial	55	57	157	170	1.67	1.72	1.62	1.73
Total commercial	\$110	\$111	\$397	\$236	0.10	0.11	0.12	0.08

<sup>(1)</sup> Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans and leases excluding loans accounted for under the fair value option.

Table 39 presents commercial credit exposure by type for utilized, unfunded and total binding committed credit exposure. Commercial utilized credit exposure includes standby letters of credit (SBLCs) and financial guarantees, bankers' acceptances and commercial letters of credit for which we are legally bound to advance funds under prescribed conditions, during a specified time period. Although funds have not yet been advanced, these exposure types are considered utilized for credit risk management purposes.

Total commercial utilized credit exposure increased \$13.3 billion during the nine months ended September 30, 2016 primarily driven by growth in loans and leases. The utilization rate for loans and leases, SBLCs and financial guarantees, commercial letters of credit and bankers' acceptances, in the aggregate, was 57 percent and 56 percent at September 30, 2016 and December 31, 2015.

Table 39

## Commercial Credit Exposure by Type

	Commercial Utilized <sup>(1)</sup>		Commercial Unfunded <sup>(2, 3, 4)</sup>		Total Commercial Committed	
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015
	2016	2015	2016	2015	2016	2015
(Dollars in millions)	2016	2015	2016	2015	2016	2015
Loans and leases <sup>(5)</sup>	\$458,416	\$ 446,832	\$366,792	\$ 376,478	\$825,208	\$ 823,310
Derivative assets <sup>(6)</sup>	47,896	49,990	—	—	47,896	49,990
Standby letters of credit and financial guarantees	33,973	33,236	617	690	34,590	33,926
Debt securities and other investments	22,856	21,709	6,293	4,173	29,149	25,882
Loans held-for-sale	7,429	5,456	278	1,203	7,707	6,659
Commercial letters of credit	1,702	1,725	127	390	1,829	2,115
Bankers' acceptances	169	298	—	—	169	298
Other	374	317	—	—	374	317
Total	\$572,815	\$ 559,563	\$374,107	\$ 382,934	\$946,922	\$ 942,497

- Total commercial utilized exposure includes loans of \$6.3 billion and \$5.1 billion and issued letters of credit with a
- (1) notional amount of \$279 million and \$290 million accounted for under the fair value option at September 30, 2016 and December 31, 2015.
  - (2) Total commercial unfunded exposure includes loan commitments accounted for under the fair value option with a notional amount of \$7.4 billion and \$10.6 billion at September 30, 2016 and December 31, 2015.
  - (3) Excludes unused business card lines which are not legally binding.  
Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g.,
  - (4) syndicated or participated) to other financial institutions. The distributed amounts were \$12.4 billion and \$14.3 billion at September 30, 2016 and December 31, 2015.
  - (5) Includes credit risk exposure associated with assets under operating lease arrangements of \$5.9 billion and \$6.0 billion at September 30, 2016 and December 31, 2015.  
Derivative assets are carried at fair value, reflect the effects of legally enforceable master netting agreements and
  - (6) have been reduced by cash collateral of \$46.5 billion and \$41.9 billion at September 30, 2016 and December 31, 2015. Not reflected in utilized and committed exposure is additional non-cash derivative collateral held of \$25.3 billion and \$23.3 billion which consists primarily of other marketable securities.



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Table 40 presents commercial utilized reservable criticized exposure by loan type. Criticized exposure corresponds to the Special Mention, Substandard and Doubtful asset categories as defined by regulatory authorities. Total commercial utilized reservable criticized exposure increased \$1.0 billion, or seven percent, during the nine months ended September 30, 2016 driven by downgrades primarily related to our energy exposure outpacing paydowns and upgrades. Approximately 75 percent and 78 percent of commercial utilized reservable criticized exposure was secured at September 30, 2016 and December 31, 2015.

Table 40

## Commercial Utilized Reservable Criticized Exposure

	September 30, 2016		December 31, 2015	
	Amount (1)	Percent (2)	Amount (1)	Percent (2)
(Dollars in millions)				
U.S. commercial	\$ 11,046	3.74 %	\$ 9,965	3.56 %
Commercial real estate	302	0.51	513	0.87
Commercial lease financing	778	3.65	708	3.31
Non-U.S. commercial	4,007	4.30	3,944	4.04
	16,133	3.44	15,130	3.30
U.S. small business commercial	805	6.16	766	5.95
Total commercial utilized reservable criticized exposure	\$ 16,938	3.52	\$ 15,896	3.38

Total commercial utilized reservable criticized exposure includes loans and leases of \$15.5 billion and \$14.5 billion and commercial letters of credit of \$1.5 billion and \$1.4 billion at September 30, 2016 and December 31, 2015.

(1) Percentages are calculated as commercial utilized reservable criticized exposure divided by total commercial utilized reservable exposure for each exposure category.

## U.S. Commercial

At September 30, 2016, 71 percent of the U.S. commercial loan portfolio, excluding small business, was managed in Global Banking, 17 percent in Global Markets, 10 percent in GWIM (generally business-purpose loans for high net worth clients) and the remainder primarily in Consumer Banking. U.S. commercial loans, excluding loans accounted for under the fair value option, increased \$14.2 billion, or six percent, during the nine months ended September 30, 2016 due to growth across all of the commercial businesses. Energy exposure largely drove increases in reservable criticized balances of \$1.1 billion, or 11 percent, and nonperforming loans and leases of \$572 million, or 66 percent, during the nine months ended September 30, 2016, as well as increases in net charge-offs of \$10 million and \$97 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015.

## Commercial Real Estate

Commercial real estate primarily includes commercial loans and leases secured by non-owner-occupied real estate and is dependent on the sale or lease of the real estate as the primary source of repayment. The portfolio remains diversified across property types and geographic regions. California represented the largest state concentration at 24 percent and 21 percent of the commercial real estate loans and leases portfolio at September 30, 2016 and December 31, 2015. The commercial real estate portfolio is predominantly managed in Global Banking and consists of loans made primarily to public and private developers, and commercial real estate firms. Outstanding loans remained relatively unchanged with new originations slightly outpacing paydowns during the nine months ended September 30, 2016.

For the three and nine months ended September 30, 2016, we continued to see low default rates and solid credit quality in both the residential and non-residential portfolios. We use a number of proactive risk mitigation initiatives to reduce adversely rated exposure in the commercial real estate portfolio including transfers of deteriorating exposures to management by independent special asset officers and the pursuit of loan restructurings or asset sales to achieve the best results for our customers and the Corporation.

Nonperforming commercial real estate loans and foreclosed properties decreased \$32 million, or 30 percent, and reservable criticized balances decreased \$211 million, or 41 percent, during the nine months ended September 30, 2016. The decrease in reservable criticized balances was primarily due to loan resolutions and strong commercial real estate fundamentals in most sectors. Net recoveries were \$23 million and \$31 million for the three and nine months ended September 30, 2016 compared to net recoveries of \$10 million and \$9 million for the same periods in 2015.

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Table 41 presents outstanding commercial real estate loans by geographic region, based on the geographic location of the collateral, and by property type.

Table 41

## Outstanding Commercial Real Estate Loans

(Dollars in millions)	September 30 2016	December 31 2015
By Geographic Region		
California	\$ 13,523	\$ 12,063
Northeast	9,712	10,292
Southwest	7,743	7,789
Southeast	5,883	6,066
Midwest	4,406	3,780
Florida	3,120	3,330
Illinois	2,569	2,536
Northwest	2,097	2,327
Midsouth	2,068	2,435
Non-U.S.	3,359	3,549
Other <sup>(1)</sup>	2,823	3,032
Total outstanding commercial real estate loans	\$ 57,303	\$ 57,199
By Property Type		
Non-residential		
Office	\$ 16,173	\$ 15,246
Multi-family rental	9,064	8,956
Shopping centers/retail	8,645	8,594
Hotels/motels	5,461	5,415
Industrial/warehouse	4,922	5,501
Multi-use	2,920	3,003
Unsecured	1,731	2,056
Land and land development	380	539
Other	5,907	5,791
Total non-residential	55,203	55,101
Residential	2,100	2,098
Total outstanding commercial real estate loans	\$ 57,303	\$ 57,199

<sup>(1)</sup> Includes unsecured loans to real estate investment trusts and national home builders whose portfolios of properties span multiple geographic regions and properties in the states of Colorado, Utah, Hawaii, Wyoming and Montana.

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At September 30, 2016, total committed non-residential exposure was \$77.3 billion compared to \$81.0 billion at December 31, 2015, of which \$55.2 billion and \$55.1 billion were funded loans. Non-residential nonperforming loans and foreclosed properties decreased \$24 million, or 26 percent, to \$70 million at September 30, 2016 compared to December 31, 2015 due to decreases across most property types. The non-residential nonperforming loans and foreclosed properties represented 0.13 percent and 0.17 percent of total non-residential loans and foreclosed properties at September 30, 2016 and December 31, 2015. Non-residential utilized reservable criticized exposure decreased \$203 million, or 40 percent, to \$299 million at September 30, 2016 compared to \$502 million at December 31, 2015, which represented 0.53 percent and 0.89 percent of non-residential utilized reservable exposure. For the non-residential portfolio, net recoveries increased \$13 million to \$23 million and increased \$20 million to \$30 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015.

At September 30, 2016, total committed residential exposure was \$4.0 billion compared to \$4.1 billion at December 31, 2015, of which \$2.1 billion were funded secured loans for both periods. The residential nonperforming loans and foreclosed properties and residential utilized reservable criticized exposure decreased \$8 million, or 57 percent, to \$6 million and \$8 million, or 73 percent, to \$3 million for the nine months ended September 30, 2016. The nonperforming loans, leases and foreclosed properties and the utilized reservable criticized ratios for the residential portfolio were 0.30 percent and 0.15 percent at September 30, 2016 compared to 0.66 percent and 0.52 percent at December 31, 2015.

At September 30, 2016 and December 31, 2015, the commercial real estate loan portfolio included \$6.6 billion and \$7.6 billion of funded construction and land development loans that were originated to fund the construction and/or rehabilitation of commercial properties. Reservable criticized construction and land development loans totaled \$100 million and \$108 million, and nonperforming construction and land development loans and foreclosed properties totaled \$25 million and \$44 million at September 30, 2016 and December 31, 2015. During a property's construction phase, interest income is typically paid from interest reserves that are established at the inception of the loan. As construction is completed and the property is put into service, these interest reserves are depleted and interest payments from operating cash flows begin. We do not recognize interest income on nonperforming loans regardless of the existence of an interest reserve.

## Non-U.S. Commercial

At September 30, 2016, 78 percent of the non-U.S. commercial loan portfolio was managed in Global Banking and 22 percent in Global Markets. Outstanding loans, excluding loans accounted for under the fair value option, decreased \$4.1 billion during the nine months ended September 30, 2016 primarily due to increased payoffs. Net charge-offs increased \$88 million for the nine months ended September 30, 2016 compared to the same period in 2015. The increase was primarily due to higher energy sector related losses in the first half of 2016. For more information on the non-U.S. commercial portfolio, see Non-U.S. Portfolio on page 78.

## U.S. Small Business Commercial

The U.S. small business commercial loan portfolio is comprised of small business card loans and small business loans managed in Consumer Banking. Credit card-related products were 48 percent and 45 percent of the U.S. small business commercial portfolio at September 30, 2016 and December 31, 2015. Net charge-offs decreased \$2 million to \$55 million and \$13 million to \$157 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015, primarily driven by portfolio improvement. Of the U.S. small business commercial net charge-offs, 79 percent and 85 percent were credit card-related products for the three and nine months ended September 30, 2016 compared to 78 percent and 82 percent for the same periods in 2015.



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## Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity

Table 42 presents the nonperforming commercial loans, leases and foreclosed properties activity during the three and nine months ended September 30, 2016 and 2015. Nonperforming loans do not include loans accounted for under the fair value option. During the three and nine months ended September 30, 2016, nonperforming commercial loans and leases increased \$340 million and \$787 million to \$2.0 billion primarily due to energy and metals and mining exposure. Approximately 80 percent of commercial nonperforming loans, leases and foreclosed properties were secured and approximately 76 percent were contractually current. Commercial nonperforming loans were carried at approximately 88 percent of their unpaid principal balance before consideration of the allowance for loan and lease losses as the carrying value of these loans has been reduced to the estimated property value less costs to sell.

Table 42

Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity <sup>(1, 2)</sup>

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Nonperforming loans and leases, beginning of period	\$1,659	\$1,172	\$1,212	\$1,113
Additions to nonperforming loans and leases:				
New nonperforming loans and leases	890	205	2,076	911
Advances	2	11	13	28
Reductions to nonperforming loans and leases:				
Paydowns	(267 )	(145 )	(598 )	(358 )
Sales	(73 )	—	(166 )	(81 )
Returns to performing status <sup>(3)</sup>	(101 )	(47 )	(177 )	(98 )
Charge-offs	(102 )	(93 )	(350 )	(200 )
Transfers to foreclosed properties <sup>(4)</sup>	—	(1 )	(2 )	(213 )
Transfers to loans held-for-sale	(9 )	—	(9 )	—
Total net additions/(reductions) to nonperforming loans and leases	340	(70 )	787	(11 )
Total nonperforming loans and leases, September 30	1,999	1,102	1,999	1,102
Foreclosed properties, beginning of period	19	265	15	67
Additions to foreclosed properties:				
New foreclosed properties <sup>(4)</sup>	—	—	22	207
Reductions to foreclosed properties:				
Sales	(3 )	(207 )	(21 )	(214 )
Write-downs	—	—	—	(2 )
Total net additions/(reductions) to foreclosed properties	(3 )	(207 )	1	(9 )
Total foreclosed properties, September 30	16	58	16	58
Nonperforming commercial loans, leases and foreclosed properties, September 30	\$2,015	\$1,160	\$2,015	\$1,160
Nonperforming commercial loans and leases as a percentage of outstanding commercial loans and leases <sup>(5)</sup>	0.45	% 0.26	%	
Nonperforming commercial loans, leases and foreclosed properties as a percentage of outstanding commercial loans, leases and foreclosed properties <sup>(5)</sup>	0.45	0.27		

<sup>(1)</sup> Balances do not include nonperforming LHFS of \$262 million and \$266 million at September 30, 2016 and 2015.

<sup>(2)</sup> Includes U.S. small business commercial activity. Small business card loans are excluded as they are not classified as nonperforming.

<sup>(3)</sup> Commercial loans and leases may be returned to performing status when all principal and interest is current and full repayment of the remaining contractual principal and interest is expected, or when the loan otherwise becomes

well-secured and is in the process of collection. TDRs are generally classified as performing after a sustained period of demonstrated payment performance.

- (4) New foreclosed properties represents transfers of nonperforming loans to foreclosed properties net of charge-offs recorded during the first 90 days after transfer of a loan to foreclosed properties.
- (5) Outstanding commercial loans exclude loans accounted for under the fair value option.

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Table 43 presents our commercial TDRs by product type and performing status. U.S. small business commercial TDRs are comprised of renegotiated small business card loans and small business loans. The renegotiated small business card loans are not classified as nonperforming as they are charged off no later than the end of the month in which the loan becomes 180 days past due. For more information on TDRs, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 43

## Commercial Troubled Debt Restructurings

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Total	Non-performing	Performing	Total	Non-performing	Performing
U.S. commercial	\$1,947	\$ 724	\$ 1,223	\$1,225	\$ 394	\$ 831
Commercial real estate	102	27	75	118	27	91
Commercial lease financing	4	2	2	—	—	—
Non-U.S. commercial	268	58	210	363	136	227
	2,321	811	1,510	1,706	557	1,149
U.S. small business commercial	17	3	14	29	10	19
Total commercial troubled debt restructurings	\$2,338	\$ 814	\$ 1,524	\$1,735	\$ 567	\$ 1,168

## Industry Concentrations

Table 44 presents commercial committed and utilized credit exposure by industry and the total net credit default protection purchased to cover the funded and unfunded portions of certain credit exposures. Our commercial credit exposure is diversified across a broad range of industries. Total commercial committed credit exposure increased \$4.4 billion, during the nine months ended September 30, 2016 to \$946.9 billion. Increases in commercial committed exposure were concentrated in pharmaceuticals and biotechnology, healthcare equipment and services, and commercial services and supplies, partially offset by lower exposure to banking, diversified financials and energy.

Industry limits are used internally to manage industry concentrations and are based on committed exposures and capital usage that are allocated on an industry-by-industry basis. A risk management framework is in place to set and approve industry limits as well as to provide ongoing monitoring. The Management Risk Committee oversees industry limit governance.

Diversified financials, our largest industry concentration with committed exposure of \$122.8 billion, decreased \$5.6 billion, or four percent, during the nine months ended September 30, 2016. The decrease was primarily due to a reduction in bridge financing exposure and other commitments.

Real estate, our second largest industry concentration with committed exposure of \$84.1 billion, decreased \$3.6 billion, or four percent, during the nine months ended September 30, 2016. Real estate construction and land development exposure represented 12 percent and 14 percent of the total real estate industry committed exposure at September 30, 2016 and December 31, 2015. For more information on the commercial real estate and related portfolios, see Commercial Portfolio Credit Risk Management – Commercial Real Estate on page 70.

The decline in oil prices has impacted and may continue to impact the financial performance of energy producers as well as energy equipment and service providers within the energy sector. Our energy-related committed exposure decreased \$5.1 billion to \$38.7 billion during the nine months ended September 30, 2016. Within the higher risk sub-sectors of exploration and production and oil field services, total committed exposure declined \$2.7 billion to \$15.4 billion, or 40 percent of total committed energy exposure, during the nine months ended September 30, 2016. Total utilized exposure to these sub-sectors declined approximately \$1.4 billion to \$6.9 billion during the nine months



ended September 30, 2016. Of the total utilized exposure to the higher risk sub-sectors, 56 percent was criticized at September 30, 2016. Energy sector net charge-offs increased \$211 million to \$226 million for the nine months ended September 30, 2016 compared to the same period in 2015 and energy sector reservable criticized exposure increased \$1.3 billion to \$5.9 billion during the nine months ended September 30, 2016 due to sustained low oil prices. The energy allowance for credit losses increased to \$1.0 billion during the nine months ended September 30, 2016 primarily due to increased allowance coverage for the higher risk sub-sectors.

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Table 44

Commercial Credit Exposure by Industry <sup>(1)</sup>

(Dollars in millions)	Commercial Utilized		Total Commercial Committed <sup>(2)</sup>	
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015
Diversified financials	\$76,639	\$ 79,496	\$122,795	\$ 128,436
Real estate <sup>(3)</sup>	61,522	61,759	84,057	87,650
Healthcare equipment and services	37,553	35,134	65,780	57,901
Retailing	40,633	37,675	63,782	63,975
Capital goods	34,364	30,790	63,478	58,583
Government and public education	45,244	44,835	54,600	53,133
Banking	39,533	45,952	46,644	53,825
Materials	23,135	24,012	44,508	46,013
Consumer services	26,778	24,084	41,982	37,058
Food, beverage and tobacco	19,771	18,316	39,181	43,164
Energy	19,741	21,257	38,746	43,811
Commercial services and supplies	23,830	19,552	38,202	32,045
Utilities	12,408	11,396	28,154	27,849
Transportation	20,428	19,369	27,760	27,371
Media	13,171	12,833	25,587	24,194
Pharmaceuticals and biotechnology	6,037	6,302	25,162	16,472
Individuals and trusts	16,775	17,992	22,341	23,176
Technology hardware and equipment	8,564	6,337	19,965	24,734
Software and services	8,193	6,617	18,344	18,362
Automobiles and components	5,252	4,804	12,897	11,329
Insurance, including monolines	6,041	5,095	12,250	10,728
Telecommunication services	5,952	4,717	11,372	10,645
Consumer durables and apparel	5,804	6,053	10,965	11,165
Food and staples retailing	4,899	4,351	8,848	9,439
Religious and social organizations	4,662	4,526	6,429	5,929
Other	5,886	6,309	13,093	15,510
Total commercial credit exposure by industry	\$572,815	\$ 559,563	\$946,922	\$ 942,497
Net credit default protection purchased on total commitments <sup>(4)</sup>			\$(4,586 )	\$(6,677 )

<sup>(1)</sup> Includes U.S. small business commercial exposure.

Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g.,

<sup>(2)</sup> syndicated or participated) to other financial institutions of \$12.4 billion and \$14.3 billion at September 30, 2016 and December 31, 2015.

Industries are viewed from a variety of perspectives to best isolate the perceived risks. For purposes of this table,

<sup>(3)</sup> the real estate industry is defined based on the borrowers' or counterparties' primary business activity using operating cash flows and primary source of repayment as key factors.

<sup>(4)</sup> Represents net notional credit protection purchased. For additional information, see Commercial Portfolio Credit Risk Management – Risk Mitigation on page 76.

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## Risk Mitigation

We purchase credit protection to cover the funded portion as well as the unfunded portion of certain credit exposures. To lower the cost of obtaining our desired credit protection levels, we may add credit exposure within an industry, borrower or counterparty group by selling protection.

At September 30, 2016 and December 31, 2015, net notional credit default protection purchased in our credit derivatives portfolio to hedge our funded and unfunded exposures for which we elected the fair value option, as well as certain other credit exposures, was \$4.6 billion and \$6.7 billion. We recorded net losses of \$80 million and \$408 million for the three and nine months ended September 30, 2016 compared to net gains of \$191 million and \$78 million for the same periods in 2015 on these positions. The gains and losses on these instruments were offset by gains and losses on the related exposures. The Value-at-Risk (VaR) results for these exposures are included in the fair value option portfolio information in Table 52. For additional information, see Trading Risk Management on page 84.

Tables 45 and 46 present the maturity profiles and the credit exposure debt ratings of the net credit default protection portfolio at September 30, 2016 and December 31, 2015.

Table 45  
Net Credit Default Protection by Maturity

	September 30 2016		December 31 2015	
Less than or equal to one year	53	%	39	%
Greater than one year and less than or equal to five years	44		59	
Greater than five years	3		2	
Total net credit default protection	100	%	100	%

Table 46  
Net Credit Default Protection by Credit Exposure Debt Rating

(Dollars in millions)	September 30, 2016		December 31, 2015	
	Net Notional (3)	Percent of Total	Net Notional (3)	Percent of Total
Ratings <sup>(1, 2)</sup>				
A	\$(393 )	8.6 %	\$(752 )	11.3 %
BBB	(2,401 )	52.4	(3,030 )	45.4
BB	(1,105 )	24.1	(2,090 )	31.3
B	(632 )	13.8	(634 )	9.5
CCC and below	(24 )	0.5	(139 )	2.1
NR <sup>(4)</sup>	(31 )	0.6	(32 )	0.4
Total net credit default protection	\$(4,586)	100.0%	\$(6,677)	100.0%

(1) Ratings are refreshed on a quarterly basis.

(2) Ratings of BBB- or higher are considered to meet the definition of investment grade.

(3) Represents net credit default protection purchased.

(4) NR is comprised of index positions held and any names that have not been rated.

In addition to our net notional credit default protection purchased to cover the funded and unfunded portion of certain credit exposures, credit derivatives are used for market-making activities for clients and establishing positions intended to profit from directional or relative value changes. We execute the majority of our credit derivative trades in the OTC market with large, multinational financial institutions, including broker-dealers and, to a lesser degree, with a

variety of other investors. Because these transactions are executed in the OTC market, we are subject to settlement risk. We are also subject to credit risk in the event that these counterparties fail to perform under the terms of these contracts. In most cases, credit derivative transactions are executed on a daily margin basis. Therefore, events such as a credit downgrade, depending on the ultimate rating level, or a breach of credit covenants would typically require an increase in the amount of collateral required by the counterparty, where applicable, and/or allow us to take additional protective measures such as early termination of all trades.

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Table 47 presents the total contract/notional amount of credit derivatives outstanding and includes both purchased and written credit derivatives. The credit risk amounts are measured as net asset exposure by counterparty, taking into consideration all contracts with the counterparty. For more information on our written credit derivatives, see Note 2 – Derivatives to the Consolidated Financial Statements.

The credit risk amounts discussed above and presented in Table 47 take into consideration the effects of legally enforceable master netting agreements while amounts disclosed in Note 2 – Derivatives to the Consolidated Financial Statements are shown on a gross basis. Credit risk reflects the potential benefit from offsetting exposure to non-credit derivative products with the same counterparties that may be netted upon the occurrence of certain events, thereby reducing our overall exposure.

Table 47  
Credit Derivatives

(Dollars in millions)	September 30, 2016		December 31, 2015	
	Contract/ Notional	Credit Risk	Contract/ Notional	Credit Risk
Purchased credit derivatives:				
Credit default swaps	\$811,805	\$2,805	\$928,300	\$3,677
Total return swaps/other	31,502	391	26,427	1,596
Total purchased credit derivatives	\$843,307	\$3,196	\$954,727	\$5,273
Written credit derivatives:				
Credit default swaps	\$803,211	n/a	\$924,143	n/a
Total return swaps/other	43,228	n/a	39,658	n/a
Total written credit derivatives	\$846,439	n/a	\$963,801	n/a

n/a = not applicable

## Counterparty Credit Risk Valuation Adjustments

We record counterparty credit risk valuation adjustments on certain derivative assets, including our credit default protection purchased, in order to properly reflect the credit risk of the counterparty, as presented in Table 48. We calculate CVA based on a modeled expected exposure that incorporates current market risk factors including changes in market spreads and non-credit related market factors that affect the value of a derivative. The exposure also takes into consideration credit mitigants such as legally enforceable master netting agreements and collateral. For additional information, see Note 2 – Derivatives to the Consolidated Financial Statements.

We enter into risk management activities to offset market driven exposures. We often hedge the counterparty spread risk in CVA with credit default swaps (CDS). We hedge other market risks in CVA primarily with currency and interest rate swaps. In certain instances, the net-of-hedge amounts in the table below move in the same direction as the gross amount or may move in the opposite direction. This is a consequence of the complex interaction of the risks being hedged resulting in limitations in the ability to perfectly hedge all of the market exposures at all times.

Table 48  
Credit Valuation Gains and Losses

Gains (Losses)	Three Months Ended September 30				Nine Months Ended September 30							
	2016		2015		2016		2015					
(Dollars in millions)	Gross	Hedge	Net	Gross	Hedge	Net	Gross	Hedge	Net	Gross	Hedge	Net
Credit valuation	\$280	\$(214)	\$66	\$(138)	\$205	\$67	\$45	\$106	\$151	\$85	\$89	\$174



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## Non-U.S. Portfolio

Our non-U.S. credit and trading portfolios are subject to country risk. We define country risk as the risk of loss from unfavorable economic and political conditions, currency fluctuations, social instability and changes in government policies. A risk management framework is in place to measure, monitor and manage non-U.S. risk and exposures. In addition to the direct risk of doing business in a country, we also are exposed to indirect country risks (e.g., related to the collateral received on secured financing transactions or related to client clearing activities). These indirect exposures are managed in the normal course of business through credit, market and operational risk governance, rather than through country risk governance.

Table 49 presents our 20 largest non-U.S. country exposures at September 30, 2016. These exposures accounted for 87 percent and 86 percent of our total non-U.S. exposure at September 30, 2016 and December 31, 2015. Net country exposure for these 20 countries increased \$18.3 billion from December 31, 2015 primarily driven by increases in Germany, and to a lesser extent Canada and France. On a product basis, the increase was driven by an increase in funded loans and loan equivalents in Germany and Canada, higher unfunded commitments in Germany, and an increase in securities in France and Canada.

Non-U.S. exposure is presented on an internal risk management basis and includes sovereign and non-sovereign credit exposure, securities and other investments issued by or domiciled in countries other than the U.S. The risk assignments by country can be adjusted for external guarantees and certain collateral types. Exposures that are subject to external guarantees are reported under the country of the guarantor. Exposures with tangible collateral are reflected in the country where the collateral is held. For securities received, other than cross-border resale agreements, outstandings are assigned to the domicile of the issuer of the securities.

Funded loans and loan equivalents include loans, leases, and other extensions of credit and funds, including letters of credit and due from placements, which have not been reduced by collateral, hedges or credit default protection. Funded loans and loan equivalents are reported net of charge-offs but prior to any allowance for loan and lease losses. Unfunded commitments are the undrawn portion of legally binding commitments related to loans and loan equivalents.

Net counterparty exposure includes the fair value of derivatives, including the counterparty risk associated with CDS, and secured financing transactions. Derivatives exposures are presented net of collateral, which is predominantly cash, pledged under legally enforceable master netting agreements. Secured financing transaction exposures are presented net of eligible cash or securities pledged as collateral.

Securities and other investments are carried at fair value and long securities exposures are netted against short exposures with the same underlying issuer to, but not below, zero (i.e., negative issuer exposures are reported as zero). Other investments include our GPI portfolio and strategic investments.

Net country exposure represents country exposure less hedges and credit default protection purchased, net of credit default protection sold. We hedge certain of our country exposures with credit default protection primarily in the form of single-name, as well as indexed and tranching CDS. The exposures associated with these hedges represent the amount that would be realized upon the isolated default of an individual issuer in the relevant country assuming a zero recovery rate for that individual issuer, and are calculated based on the CDS notional amount adjusted for any fair value receivable or payable. Changes in the assumption of an isolated default can produce different results in a particular tranche.





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Table 49

## Top 20 Non-U.S. Countries Exposure

(Dollars in millions)	Funded Loans and Loan Equivalents	Unfunded Loan Commitments	Net Counterparty Exposure	Securities/ Other Investments	Country Exposure at September 30 2016	Hedges and Credit Default Protection	Net Country Exposure at September 30 2016	Increase (Decrease) from December 31 2015
United Kingdom	\$ 31,206	\$ 12,695	\$ 8,589	\$ 4,076	\$ 56,566	\$(4,153)	\$ 52,413	\$(833)
Germany	11,254	17,622	1,585	2,841	33,302	(4,316)	28,986	15,582
Canada	6,851	7,297	2,000	3,857	20,005	(1,560)	18,445	3,713
Japan	14,042	629	1,260	1,879	17,810	(1,833)	15,977	1,613
Brazil	9,378	293	765	4,196	14,632	(297)	14,335	(1,315)
France	3,317	4,813	2,553	6,165	16,848	(3,921)	12,927	4,241
China	8,428	733	1,106	1,661	11,928	(389)	11,539	1,065
India	6,033	319	415	2,390	9,157	(218)	8,939	(1,415)
Australia	3,962	2,648	362	1,809	8,781	(353)	8,428	(1,117)
Hong Kong	6,231	221	822	555	7,829	(32)	7,797	208
Netherlands	3,066	2,719	567	2,707	9,059	(1,389)	7,670	36
Switzerland	4,226	2,823	368	583	8,000	(1,301)	6,699	436
South Korea	4,200	682	781	1,451	7,114	(526)	6,588	(270)
Italy	2,896	893	748	1,430	5,967	(905)	5,062	(246)
Mexico	3,432	995	249	492	5,168	(228)	4,940	(114)
Singapore	2,472	144	727	1,657	5,000	(63)	4,937	208
United Arab Emirates	2,254	159	720	25	3,158	(116)	3,042	16
Turkey	2,899	48	65	14	3,026	(48)	2,978	(162)
Belgium	846	1,774	166	242	3,028	(416)	2,612	(2,856)
Spain	1,802	664	243	843	3,552	(1,004)	2,548	(515)
Total top 20 non-U.S. countries exposure	\$ 128,795	\$ 58,171	\$ 24,091	\$ 38,873	\$ 249,930	\$(23,068)	\$ 226,862	\$ 18,275

Weakening of commodity prices, signs of slowing growth in China, a recession in Brazil and recent political events in Turkey are driving risk aversion in emerging markets. At September 30, 2016, net exposure to China was \$11.5 billion, concentrated in large state-owned companies, subsidiaries of multinational corporations and commercial banks. At September 30, 2016, net exposure to Brazil was \$14.3 billion, concentrated in sovereign securities, oil and gas companies and commercial banks. At September 30, 2016, net exposure to Turkey was \$3.0 billion, concentrated in commercial banks.

The U.K. Referendum to leave the EU has led to political and economic uncertainty that may continue over the next several years. At September 30, 2016, net exposure to the U.K. was \$52.4 billion, concentrated in multinational corporations and sovereign clients. For additional information, see Executive Summary – Third Quarter 2016 Economic and Business Environment on page 4.

## Provision for Credit Losses

The provision for credit losses increased \$44 million to \$850 million, and \$472 million to \$2.8 billion for the three and nine months ended September 30, 2016 compared to the same periods in 2015. The provision for credit losses was \$38 million and \$118 million lower than net charge-offs for the three and nine months ended September 30, 2016, resulting in a reduction in the allowance for credit losses. This compared to a reduction of \$126 million and \$843 million in the allowance for credit losses for the three and nine months ended September 30, 2015.

The provision for credit losses for the consumer portfolio increased \$163 million to \$705 million, and \$126 million to \$1.8 billion for the three and nine months ended September 30, 2016 compared to the same periods in 2015 due to a slower pace of credit quality improvement. Included in the provision is expense of \$8 million and a benefit of \$81 million related to the PCI loan portfolio for the three and nine months ended September 30, 2016 compared to a benefit of \$68 million and \$40 million for the same periods in 2015.

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The provision for credit losses for the commercial portfolio, including unfunded lending commitments, decreased \$119 million to \$145 million, and increased \$346 million to \$983 million for the three and nine months ended September 30, 2016 compared to the same periods in 2015. The three-month decrease was driven by a slower pace of loan growth and the nine-month increase was primarily driven by an increase in energy sector reserves for the higher risk energy sub-sectors. Although energy prices have shown improvement during the last six months, they have not fully recovered to the pre-energy crisis levels.

### Allowance for Credit Losses

#### Allowance for Loan and Lease Losses

The allowance for loan and lease losses is comprised of two components. The first component covers nonperforming commercial loans and TDRs. The second component covers loans and leases on which there are incurred losses that are not yet individually identifiable, as well as incurred losses that may not be represented in the loss forecast models. We evaluate the adequacy of the allowance for loan and lease losses based on the total of these two components. The allowance for loan and lease losses excludes LHFS and loans accounted for under the fair value option as the fair value reflects a credit risk component. For more information on the allowance for loan and lease losses, see Allowance for Credit Losses in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

During the three and nine months ended September 30, 2016, the factors that impacted the allowance for loan and lease losses included overall improvements in the credit quality of the portfolios driven by continuing improvements in the U.S. economy and labor markets, continuing proactive credit risk management initiatives and the impact of recent higher credit quality originations. Additionally, the resolution of uncertainties through current recognition of net charge-offs has impacted the amount of reserve needed in certain portfolios. Evidencing the improvements in the U.S. economy and labor markets are modest growth in consumer spending, improvements in unemployment levels, increases in home prices and a decrease in the absolute level of national consumer bankruptcy filings. In addition to these improvements, in the consumer portfolio, loan sales, returns to performing status, paydowns and charge-offs continued to outpace new nonaccrual loans. During the nine months ended September 30, 2016, the allowance for loan and lease losses in the commercial portfolio reflected increased coverage for the energy sector due to sustained low oil prices which impacted the financial performance of energy clients and contributed to an increase in reservable criticized balances.

The allowance for loan and lease losses for the consumer portfolio, as presented in Table 51, was \$6.4 billion at September 30, 2016, a decrease of \$1.0 billion from December 31, 2015. The decrease was primarily in the home equity, residential mortgage and credit card portfolios. Reductions in the residential mortgage and home equity portfolios were due to improved home prices, lower delinquencies and a decrease in consumer loan balances, as well as write-offs in our PCI loan portfolio.

The decrease in the allowance related to the U.S. credit card and unsecured consumer lending portfolios was primarily due to improvement in delinquencies and more generally in unemployment levels. For example, in the U.S. credit card portfolio, accruing loans 30 days or more past due decreased to \$1.5 billion at September 30, 2016 from \$1.6 billion (to 1.64 percent from 1.76 percent of outstanding U.S. credit card loans) at December 31, 2015, and accruing loans 90 days or more past due decreased to \$702 million at September 30, 2016 from \$789 million (to 0.79 percent from 0.88 percent of outstanding U.S. credit card loans) at December 31, 2015. See Tables 25, 26 and 33 for additional details on key credit statistics for the credit card and other unsecured consumer lending portfolios.

The allowance for loan and lease losses for the commercial portfolio, as presented in Table 51, was \$5.3 billion at September 30, 2016, an increase of \$464 million from December 31, 2015 driven by increased allowance coverage for the higher risk energy sub-sectors as a result of sustained low oil prices. Commercial utilized reservable criticized

exposure increased to \$16.9 billion at September 30, 2016 from \$15.9 billion (to 3.52 percent from 3.38 percent of total commercial utilized reservable exposure) at December 31, 2015, largely due to downgrades in the energy portfolio. Nonperforming commercial loans increased to \$2.0 billion at September 30, 2016 from \$1.2 billion (to 0.45 percent from 0.28 percent of outstanding commercial loans excluding loans accounted for under the fair value option) at December 31, 2015 with the increase primarily in the energy and metals and mining sectors. Commercial loans and leases outstanding increased to \$452.5 billion at September 30, 2016 from \$440.8 billion at December 31, 2015. See Tables 37, 38 and 40 for additional details on key commercial credit statistics.

The allowance for loan and lease losses as a percentage of total loans and leases outstanding was 1.30 percent at September 30, 2016 compared to 1.37 percent at December 31, 2015. The decrease in the ratio was primarily due to improved credit quality in the consumer portfolios driven by improved economic conditions and write-offs in the PCI loan portfolio. The September 30, 2016 and December 31, 2015 ratios above include the PCI loan portfolio. Excluding the PCI loan portfolio, the allowance for loan and lease losses as a percentage of total loans and leases outstanding was 1.27 percent and 1.31 percent at September 30, 2016 and December 31, 2015.

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Table 50 presents a rollforward of the allowance for credit losses, which includes the allowance for loan and lease losses and the reserve for unfunded lending commitments, for the three and nine months ended September 30, 2016 and 2015.

Table 50  
Allowance for Credit Losses

	Three Months		Nine Months	
	Ended September 30		Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Allowance for loan and lease losses, beginning of period	\$11,837	\$13,068	\$12,234	\$14,419
Loans and leases charged off				
Residential mortgage	(66 )	(146 )	(339 )	(716 )
Home equity	(180 )	(199 )	(589 )	(714 )
U.S. credit card	(648 )	(652 )	(2,021 )	(2,072 )
Non-U.S. credit card	(59 )	(67 )	(183 )	(210 )
Direct/Indirect consumer	(98 )	(91 )	(287 )	(289 )
Other consumer	(63 )	(63 )	(173 )	(162 )
Total consumer charge-offs	(1,114 )	(1,218 )	(3,592 )	(4,163 )
U.S. commercial <sup>(1)</sup>	(141 )	(136 )	(423 )	(358 )
Commercial real estate	(1 )	(3 )	(9 )	(21 )
Commercial lease financing	(9 )	(7 )	(26 )	(17 )
Non-U.S. commercial	(12 )	(11 )	(101 )	(14 )
Total commercial charge-offs	(163 )	(157 )	(559 )	(410 )
Total loans and leases charged off	(1,277 )	(1,375 )	(4,151 )	(4,573 )
Recoveries of loans and leases previously charged off				
Residential mortgage	62	120	210	316
Home equity	83	79	254	271
U.S. credit card	105	106	318	321
Non-U.S. credit card	16	20	49	68
Direct/Indirect consumer	64	66	196	206
Other consumer	6	6	21	23
Total consumer recoveries	336	397	1,048	1,205
U.S. commercial <sup>(2)</sup>	24	27	111	130
Commercial real estate	24	13	40	30
Commercial lease financing	3	4	7	9
Non-U.S. commercial	2	2	4	5
Total commercial recoveries	53	46	162	174
Total recoveries of loans and leases previously charged off	389	443	1,210	1,379
Net charge-offs	(888 )	(932 )	(2,941 )	(3,194 )
Write-offs of PCI loans	(83 )	(148 )	(270 )	(726 )
Provision for loan and lease losses	834	733	2,802	2,218
Other <sup>(3)</sup>	(8 )	(64 )	(133 )	(60 )
Allowance for loan and lease losses, September 30	11,692	12,657	11,692	12,657
Reserve for unfunded lending commitments, beginning of period	750	588	646	528
Provision for unfunded lending commitments	16	73	21	133
Other <sup>(3)</sup>	1	—	100	—
Reserve for unfunded lending commitments, September 30	767	661	767	661
Allowance for credit losses, September 30	\$12,459	\$13,318	\$12,459	\$13,318

- (1) Includes U.S. small business commercial charge-offs of \$66 million and \$189 million for the three and nine months ended September 30, 2016 compared to \$67 million and \$217 million for the same periods in 2015.
- (2) Includes U.S. small business commercial recoveries of \$11 million and \$32 million for the three and nine months ended September 30, 2016 compared to \$10 million and \$47 million for the same periods in 2015.
- (3) Primarily represents the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments and certain other reclassifications.

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Table 50

## Allowance for Credit Losses (continued)

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30		
	2016	2015	2016	2015	
Loan and allowance ratios:					
Loans and leases outstanding at September 30 <sup>(4)</sup>	\$896,900	\$874,898	\$896,900	\$874,898	
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at September 30 <sup>(4)</sup>	1.30	% 1.45	% 1.30	% 1.45	%
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at September 30 <sup>(5)</sup>	1.42	1.75	1.42	1.75	
Commercial allowance for loan and lease losses as a percentage of total commercial loans and leases outstanding at September 30 <sup>(6)</sup>	1.19	1.12	1.19	1.12	
Average loans and leases outstanding <sup>(4)</sup>	\$892,207	\$869,997	\$889,498	\$865,623	
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(4, 7)</sup>	0.40	% 0.43	% 0.44	% 0.49	%
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding <sup>(4)</sup>	0.43	0.49	0.48	0.61	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at September 30 <sup>(4, 8)</sup>	140	129	140	129	
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs <sup>(7)</sup>	3.31	3.42	2.98	2.96	
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs and PCI write-offs	3.03	2.95	2.73	2.41	
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at September 30 <sup>(9)</sup>	\$4,068	\$4,682	\$4,068	\$4,682	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at September 30 <sup>(4, 9)</sup>	91	% 81	% 91	% 81	%
Loan and allowance ratios excluding PCI loans and the related valuation allowance: <sup>(10)</sup>					
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at September 30 <sup>(4)</sup>	1.27	% 1.37	% 1.27	% 1.37	%
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at September 30 <sup>(5)</sup>	1.36	1.62	1.36	1.62	
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(4)</sup>	0.40	0.43	0.45	0.50	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at September 30 <sup>(4, 8)</sup>	135	120	135	120	
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs	3.18	3.18	2.86	2.76	

<sup>(4)</sup> Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of \$8.1 billion and \$7.2 billion at September 30, 2016 and 2015. Average loans accounted for under the fair value option were \$8.4 billion and \$8.3 billion for the three and nine months ended September 30, 2016 compared to \$7.4 billion and \$8.0 billion for the same periods in 2015.

<sup>(5)</sup> Excludes consumer loans accounted for under the fair value option of \$1.8 billion and \$1.9 billion at September 30, 2016 and 2015.

- (6) Excludes commercial loans accounted for under the fair value option of \$6.3 billion and \$5.2 billion at September 30, 2016 and 2015.  
Net charge-offs exclude \$83 million and \$270 million of write-offs in the PCI loan portfolio for the three and nine months ended September 30, 2016 compared to \$148 million and \$726 million for the same periods in 2015. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 62.
- (7)
- (8) For more information on our definition of nonperforming loans, see pages 65 and 73.
- (9) Primarily includes amounts allocated to U.S. credit card and unsecured consumer lending portfolios in Consumer Banking, PCI loans and the non-U.S. credit card portfolio in All Other.
- (10) For more information on the PCI loan portfolio and the valuation allowance for PCI loans, see Note 4 – Outstanding Loans and Leases and Note 5 – Allowance for Credit Losses to the Consolidated Financial Statements.



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For reporting purposes, we allocate the allowance for credit losses across products. Table 51 presents our allocation by product type.

Table 51

## Allocation of the Allowance for Credit Losses by Product Type

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Amount	Percent of Total	Percent of Loans and Leases Outstanding <sup>(1)</sup>	Amount	Percent of Total	Percent of Loans and Leases Outstanding <sup>(1)</sup>
Allowance for loan and lease losses						
Residential mortgage	\$1,088	9.31	% 0.58	\$1,500	12.26	% 0.80
Home equity	1,901	16.26	2.75	2,414	19.73	3.18
U.S. credit card	2,857	24.44	3.22	2,927	23.93	3.27
Non-U.S. credit card	258	2.21	2.79	274	2.24	2.75
Direct/Indirect consumer	227	1.94	0.24	223	1.82	0.25
Other consumer	48	0.39	2.01	47	0.38	2.27
Total consumer	6,379	54.55	1.42	7,385	60.36	1.63
U.S. commercial <sup>(2)</sup>	3,427	29.31	1.22	2,964	24.23	1.12
Commercial real estate	915	7.83	1.60	967	7.90	1.69
Commercial lease financing	141	1.21	0.66	164	1.34	0.77
Non-U.S. commercial	830	7.10	0.95	754	6.17	0.82
Total commercial <sup>(3)</sup>	5,313	45.45	1.19	4,849	39.64	1.11
Allowance for loan and lease losses <sup>(4)</sup>	11,692	100.00%	1.30	12,234	100.00%	1.37
Reserve for unfunded lending commitments	767			646		
Allowance for credit losses	\$12,459			\$12,880		

Ratios are calculated as allowance for loan and lease losses as a percentage of loans and leases outstanding excluding loans accounted for under the fair value option. Consumer loans accounted for under the fair value option included residential mortgage loans of \$1.4 billion and \$1.6 billion and home equity loans of \$340 million and \$250 million at September 30, 2016 and December 31, 2015. Commercial loans accounted for under the fair value option included U.S. commercial loans of \$2.6 billion and \$2.3 billion and non-U.S. commercial loans of \$3.7 billion and \$2.8 billion at September 30, 2016 and December 31, 2015.

<sup>(1)</sup> Includes allowance for loan and lease losses for U.S. small business commercial loans of \$444 million and \$507 million at September 30, 2016 and December 31, 2015.

<sup>(2)</sup> Includes allowance for loan and lease losses for impaired commercial loans of \$258 million and \$217 million at September 30, 2016 and December 31, 2015.

<sup>(3)</sup> Includes allowance for loan and lease losses for impaired commercial loans of \$258 million and \$217 million at September 30, 2016 and December 31, 2015.

<sup>(4)</sup> Includes \$453 million and \$804 million of valuation allowance presented with the allowance for loan and lease losses related to PCI loans at September 30, 2016 and December 31, 2015.

## Reserve for Unfunded Lending Commitments

In addition to the allowance for loan and lease losses, we also estimate probable losses related to unfunded lending commitments such as letters of credit, financial guarantees, unfunded bankers' acceptances and binding loan commitments, excluding commitments accounted for under the fair value option. For more information on the reserve for unfunded lending commitments, see Allowance for Credit Losses in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

The reserve for unfunded lending commitments was \$767 million at September 30, 2016, an increase of \$121 million from December 31, 2015. The increase was primarily attributable to reserve builds related to continued pressure in the energy sector.

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### Market Risk Management

For information on our market risk management process, see Market Risk Management in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

### Trading Risk Management

To evaluate risk in our trading activities, we focus on the actual and potential volatility of revenues generated by individual positions as well as portfolios of positions. Various techniques and procedures are utilized to enable the most complete understanding of these risks. Quantitative measures of market risk are evaluated on a daily basis from a single position to the portfolio of the Corporation. These measures include sensitivities of positions to various market risk factors, such as the potential impact on revenue from a one basis point change in interest rates, and statistical measures utilizing both actual and hypothetical market moves, such as VaR and stress testing. Periods of extreme market stress influence the reliability of these techniques to varying degrees. Qualitative evaluations of market risk utilize the suite of quantitative risk measures while understanding each of their respective limitations. Additionally, risk managers independently evaluate the risk of the portfolios under the current market environment and potential future environments.

VaR is a common statistic used to measure market risk as it allows the aggregation of market risk factors, including the effects of portfolio diversification. A VaR model simulates the value of a portfolio under a range of scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss a portfolio is not expected to exceed more than a certain number of times per period, based on a specified holding period, confidence level and window of historical data. We use one VaR model consistently across the trading portfolios and it uses a historical simulation approach based on a three-year window of historical data. Our primary VaR statistic is equivalent to a 99 percent confidence level. This means that for a VaR with a one-day holding period, there should not be losses in excess of VaR, on average, 99 out of 100 trading days.

Within any VaR model, there are significant and numerous assumptions that will differ from company to company. The accuracy of a VaR model depends on the availability and quality of historical data for each of the risk factors in the portfolio. A VaR model may require additional modeling assumptions for new products that do not have the necessary historical market data or for less liquid positions for which accurate daily prices are not consistently available. For positions with insufficient historical data for the VaR calculation, the process for establishing an appropriate proxy is based on fundamental and statistical analysis of the new product or less liquid position. This analysis identifies reasonable alternatives that replicate both the expected volatility and correlation to other market risk factors that the missing data would be expected to experience.

VaR may not be indicative of realized revenue volatility as changes in market conditions or in the composition of the portfolio can have a material impact on the results. In particular, the historical data used for the VaR calculation might indicate higher or lower levels of portfolio diversification than will be experienced. In order for the VaR model to reflect current market conditions, we update the historical data underlying our VaR model on a weekly basis, or more frequently during periods of market stress, and regularly review the assumptions underlying the model. A relatively minor portion of risks related to our trading positions is not included in VaR. These risks are reviewed as part of our Internal Capital Adequacy Assessment Process (ICAAP). For more information regarding ICAAP, see Capital Management in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

Global Risk Management continually reviews, evaluates and enhances our VaR model so that it reflects the material risks in our trading portfolio. Changes to the VaR model are reviewed and approved prior to implementation and any material changes are reported to management through the appropriate management committees.

Trading limits on quantitative risk measures, including VaR, are independently set by Global Markets Risk Management and reviewed on a regular basis to ensure they remain relevant and within our overall risk appetite for market risks. Trading limits are reviewed in the context of market liquidity, volatility and strategic business priorities. Trading limits are set at both a granular level to ensure extensive coverage of risks as well as at aggregated portfolios to account for correlations among risk factors. All trading limits are approved at least annually. Approved trading limits are stored and tracked in a centralized limits management system. Trading limit excesses are communicated to management for review. Certain quantitative market risk measures and corresponding limits have been identified as critical in the Corporation's Risk Appetite Statement. These risk appetite limits are reported on a daily basis and are approved at least annually by the ERC and the Board.

In periods of market stress, Global Markets senior leadership communicates daily to discuss losses, key risk positions and any limit excesses. As a result of this process, the businesses may selectively reduce risk.

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Table 52 presents the total market-based trading portfolio VaR which is the combination of the covered positions trading portfolio and the impact from less liquid trading exposures. Covered positions are defined by regulatory standards as trading assets and liabilities, both on- and off-balance sheet, that meet a defined set of specifications. These specifications identify the most liquid trading positions which are intended to be held for a short-term horizon and where the Corporation is able to hedge the material risk elements in a two-way market. Positions in less liquid markets, or where there are restrictions on the ability to trade the positions, typically do not qualify as covered positions. Foreign exchange and commodity positions are always considered covered positions, except for structural foreign currency positions that we choose to exclude with prior regulatory approval. In addition, Table 52 presents our fair value option portfolio, which includes the funded and unfunded exposures for which we elect the fair value option and their corresponding hedges. The fair value option portfolio combined with the total market-based trading portfolio VaR represents the Corporation's total market-based portfolio VaR. Additionally, market risk VaR for trading activities as presented in Table 52 differs from VaR used for regulatory capital calculations due to the holding period being used. The holding period for VaR used for regulatory capital calculations is 10 days, while for the market risk VaR presented below, it is one day. Both measures utilize the same process and methodology.

The total market-based portfolio VaR results in Table 52 include market risk from all business segments to which the Corporation is exposed, excluding CVA and DVA. The majority of this portfolio is within the Global Markets segment.

Table 52 presents period-end, average, high and low daily trading VaR for the three months ended September 30, 2016, June 30, 2016 and September 30, 2015, as well as average daily trading VaR for the nine months ended September 30, 2016 and 2015, using a 99 percent confidence level.

Table 52  
Market Risk VaR for Trading Activities

(Dollars in millions)	Three Months Ended												Nine Months Ended	
	September 30, 2016				June 30, 2016				September 30, 2015				September 30	
	Period End	Average	High <sup>(1)</sup>	Low <sup>(1)</sup>	Period End	Average	High <sup>(1)</sup>	Low <sup>(1)</sup>	Period End	Average	High <sup>(1)</sup>	Low <sup>(1)</sup>	2016 Average	2015 Average
Foreign exchange	\$7	\$ 8	\$ 11	\$ 6	\$7	\$ 9	\$ 11	\$ 7	\$12	\$ 10	\$ 19	\$ 7	\$9	\$ 9
Interest rate	15	20	25	15	22	20	28	15	31	23	31	17	21	26
Credit	31	29	37	25	28	31	34	27	33	31	38	28	30	36
Equity	16	17	24	11	21	20	30	12	19	16	33	9	19	14
Commodity	8	7	10	5	8	6	8	4	5	5	7	4	6	6
Portfolio diversification	(45)	(47)	)	—	(42)	(46)	)	—	(42)	(44)	)	—	(47)	(45)
Total covered positions trading portfolio	32	34	46	28	44	40	49	30	58	41	58	30	38	46
Impact from less liquid exposures	12	6	—	—	4	6	—	—	—	10	—	—	5	10
Total market-based trading portfolio	44	40	50	31	48	46	58	35	58	51	63	39	43	56
Fair value option loans	16	18	23	16	21	25	29	21	23	22	26	18	26	25
Fair value option hedges	7	8	11	6	11	12	15	10	16	13	17	10	13	13
Fair value option portfolio diversification	(12)	(15)	)	—	(20)	(23)	)	—	(28)	(22)	)	—	(24)	(24)
Total fair value option portfolio	11	11	16	9	12	14	17	12	11	13	15	10	15	14
Portfolio diversification	(3)	(4)	)	—	(3)	(6)	)	—	(4)	(4)	)	—	(8)	(6)
Total market-based portfolio	\$52	\$ 47	\$ 61	\$ 36	\$57	\$ 54	\$ 70	\$ 44	\$65	\$ 60	\$ 74	\$ 45	\$50	\$ 64

The high and low for each portfolio may have occurred on different trading days than the high and low for the components. Therefore the impact from less liquid exposures and the amount of portfolio diversification, which is the difference between the total portfolio and the sum of the individual components, are not relevant.

<sup>(1)</sup> The average total market-based trading portfolio VaR decreased for the three months ended September 30, 2016 compared to the same period in 2015 primarily due to reduced exposure to the credit and interest rate markets.

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The graph below presents the daily total market-based trading portfolio VaR for the previous five quarters, corresponding to the data in Table 52.

Additional VaR statistics produced within the Corporation's single VaR model are provided in Table 53 at the same level of detail as in Table 52. Evaluating VaR with additional statistics allows for an increased understanding of the risks in the portfolio as the historical market data used in the VaR calculation does not necessarily follow a predefined statistical distribution. Table 53 presents average trading VaR statistics for 99 percent and 95 percent confidence levels for the three months ended September 30, 2016, June 30, 2016 and September 30, 2015.

Table 53

Average Market Risk VaR for Trading Activities – 99 Percent and 95 Percent VaR Statistics

(Dollars in millions)	Three Months Ended					
	September 30, 2016		June 30, 2016		September 30, 2015	
	99 percent	95 percent	99 percent	95 percent	99 percent	95 percent
Foreign exchange	\$8	\$4	\$9	\$5	\$10	\$6
Interest rate	20	13	20	12	23	14
Credit	29	18	31	19	31	18
Equity	17	10	20	13	16	9
Commodity	7	4	6	3	5	3
Portfolio diversification	(47)	(30)	(46)	(31)	(44)	(28)
Total covered positions trading portfolio	34	19	40	21	41	22
Impact from less liquid exposures	6	3	6	3	10	2
Total market-based trading portfolio	40	22	46	24	51	24
Fair value option loans	18	10	25	14	22	13
Fair value option hedges	8	6	12	8	13	8
Fair value option portfolio diversification	(15)	(9)	(23)	(14)	(22)	(14)
Total fair value option portfolio	11	7	14	8	13	7
Portfolio diversification	(4)	(3)	(6)	(5)	(4)	(3)
Total market-based portfolio	\$47	\$26	\$54	\$27	\$60	\$28

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### Backtesting

The accuracy of the VaR methodology is evaluated by backtesting, which compares the daily VaR results, utilizing a one-day holding period, against a comparable subset of trading revenue. A backtesting excess occurs when a trading loss exceeds the VaR for the corresponding day. These excesses are evaluated to understand the positions and market moves that produced the trading loss and to ensure that the VaR methodology accurately represents those losses. As our primary VaR statistic used for backtesting is based on a 99 percent confidence level and a one-day holding period, we expect one trading loss in excess of VaR every 100 days, or between two to three trading losses in excess of VaR over the course of a year. The number of backtesting excesses observed can differ from the statistically expected number of excesses if the current level of market volatility is materially different than the level of market volatility that existed during the three years of historical data used in the VaR calculation.

The trading revenue used for backtesting is defined by regulatory agencies in order to most closely align with the VaR component of the regulatory capital calculation. This revenue differs from total trading-related revenue in that it excludes revenue from trading activities that either do not generate market risk or the market risk cannot be included in VaR. Some examples of the types of revenue excluded for backtesting are fees, commissions, reserves, net interest income and intraday trading revenues.

We conduct daily backtesting on our portfolios, ranging from the total market-based portfolio to individual trading areas. Additionally, we conduct daily backtesting on the VaR results used for regulatory capital calculations as well as the VaR results for key legal entities, regions and risk factors. These results are reported to senior market risk management. Senior management regularly reviews and evaluates the results of these tests.

During the three and nine months ended September 30, 2016, there were no days in which there was a backtesting excess for our total market-based portfolio VaR, utilizing a one-day holding period. The backtesting results for our total market-based portfolio VaR differ from the backtesting results used for regulatory capital calculations.

### Total Trading-related Revenue

Total trading-related revenue, excluding brokerage fees, and CVA, DVA and funding valuation adjustment (FVA) gains (losses), represent the total amount earned from trading positions, including market-based net interest income, which are taken in a diverse range of financial instruments and markets. Trading account assets and liabilities are reported at fair value. For more information on fair value, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements. Trading-related revenue can be volatile and is largely driven by general market conditions and customer demand. Also, trading-related revenue is dependent on the volume and type of transactions, the level of risk assumed, and the volatility of price and rate movements at any given time within the ever-changing market environment. Significant daily revenue by business is monitored and the primary drivers of these are reviewed.



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The histogram below is a graphic depiction of trading volatility and illustrates the daily level of trading-related revenue for the three months ended September 30, 2016 compared to the three months ended June 30, 2016 and March 31, 2016. During the three months ended September 30, 2016, positive trading-related revenue was recorded for 100 percent of the trading days, of which 91 percent were daily trading gains of over \$25 million. This compares to the three months ended June 30, 2016, where positive trading-related revenue was recorded for 100 percent of the trading days, of which 95 percent were daily trading gains of over \$25 million. During the three months ended March 31, 2016, positive trading-related revenue was recorded for 98 percent of the trading days, of which 75 percent were daily trading gains of over \$25 million and the largest loss was \$14 million.

## Trading Portfolio Stress Testing

Because the very nature of a VaR model suggests results can exceed our estimates and it is dependent on a limited historical window, we also stress test our portfolio using scenario analysis. This analysis estimates the change in the value of our trading portfolio that may result from abnormal market movements.

A set of scenarios, categorized as either historical or hypothetical, are computed daily for the overall trading portfolio and individual businesses. These scenarios include shocks to underlying market risk factors that may be well beyond the shocks found in the historical data used to calculate VaR. Historical scenarios simulate the impact of the market moves that occurred during a period of extended historical market stress. Generally, a multi-week period representing the most severe point during a crisis is selected for each historical scenario. Hypothetical scenarios provide estimated portfolio impacts from potential future market stress events. Scenarios are reviewed and updated in response to changing positions and new economic or political information. In addition, new or ad hoc scenarios are developed to address specific potential market events or particular vulnerabilities in the portfolio. The stress tests are reviewed on a regular basis and the results are presented to senior management.

Stress testing for the trading portfolio is integrated with enterprise-wide stress testing and incorporated into the limits framework. The macroeconomic scenarios used for enterprise-wide stress testing purposes differ from the typical trading portfolio scenarios in that they have a longer time horizon and the results are forecasted over multiple periods for use in consolidated capital and liquidity planning. For additional information, see Managing Risk on page 39.

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## Interest Rate Risk Management for the Banking Book

The following discussion presents net interest income for banking book activities.

Interest rate risk represents the most significant market risk exposure to our banking book balance sheet. Interest rate risk is measured as the potential change in net interest income caused by movements in market interest rates. Client-facing activities, primarily lending and deposit-taking, create interest rate sensitive positions on our balance sheet.

We prepare forward-looking forecasts of net interest income. The baseline forecast takes into consideration expected future business growth, ALM positioning and the direction of interest rate movements as implied by the market-based forward curve. We then measure and evaluate the impact that alternative interest rate scenarios have on the baseline forecast in order to assess interest rate sensitivity under varied conditions. The net interest income forecast is frequently updated for changing assumptions and differing outlooks based on economic trends, market conditions and business strategies. Thus, we continually monitor our balance sheet position in order to maintain an acceptable level of exposure to interest rate changes.

The interest rate scenarios that we analyze incorporate balance sheet assumptions such as loan and deposit growth and pricing, changes in funding mix, product repricing and maturity characteristics. Our overall goal is to manage interest rate risk so that movements in interest rates do not significantly adversely affect earnings and capital.

Table 54 presents the spot and 12-month forward rates used in our baseline forecasts at September 30, 2016 and December 31, 2015.

Table 54

## Forward Rates

	September 30, 2016			December 31, 2015		
	Federal Funds	Three-month LIBOR	10-Year Swap	Federal Funds	Three-month LIBOR	10-Year Swap
Spot rates	0.50%	0.85%	1.46%	0.50%	0.61%	2.19%
12-month forward rates	0.75	1.01	1.56	1.00	1.22	2.39

Table 55 shows the pretax dollar impact to forecasted net interest income over the next 12 months from September 30, 2016 and December 31, 2015, resulting from instantaneous parallel and non-parallel shocks to the market-based forward curve. Periodically we evaluate the scenarios presented to ensure that they are meaningful in the context of the current rate environment.

In the nine months ended September 30, 2016, the asset sensitivity of our balance sheet increased, primarily driven by lower long-end rates and an increase in projected deposit growth. We continue to be asset sensitive to a parallel move in interest rates with the majority of that benefit coming from the short end of the yield curve. Additionally, higher interest rates impact the fair value of debt securities and, accordingly, for debt securities classified as AFS, may adversely affect accumulated OCI and thus capital levels under the Basel 3 capital rules. Under instantaneous upward parallel shifts, the near-term adverse impact to Basel 3 capital is reduced over time by offsetting positive impacts to net interest income. For more information on the transition provisions of Basel 3, see Capital Management – Regulatory Capital on page 40.

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Table 55

Estimated Banking Book Net Interest Income Sensitivity <sup>(1)</sup>

(Dollars in millions)	Short Rate (bps)	Long Rate (bps)	September 30 2016	December 31 2015
Curve Change				
Parallel shifts				
+100 bps instantaneous shift	+100	+100	\$ 5,313	\$ 3,606
-50 bps instantaneous shift	-50	-50	(3,773 )	(3,458 )
Flatteners				
Short-end instantaneous change	+100	—	3,294	2,418
Long-end instantaneous change	—	-50	(1,473 )	(1,767 )
Steeperers				
Short-end instantaneous change	-50	—	(2,264 )	(1,672 )
Long-end instantaneous change	—	+100	2,079	1,217

Effective July 1, 2016, we changed our accounting method for the amortization of premiums and accretion of discounts related to certain debt securities. December 31, 2015 amounts have been updated to reflect this change. <sup>(1)</sup> For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

The sensitivity analysis in Table 55 assumes that we take no action in response to these rate shocks and does not assume any change in other macroeconomic variables normally correlated with changes in interest rates. As part of our ALM activities, we use securities, certain residential mortgages, and interest rate and foreign exchange derivatives in managing interest rate sensitivity.

The behavior of our deposit portfolio in the baseline forecast and in alternate interest rate scenarios is a key assumption in our projected estimates of net interest income. The sensitivity analysis in Table 55 assumes no change in deposit portfolio size or mix from the baseline forecast in alternate rate environments. In higher rate scenarios, any customer activity resulting in the replacement of low-cost or noninterest-bearing deposits with higher-yielding deposits or market-based funding would reduce the Corporation's benefit in those scenarios.

## Interest Rate and Foreign Exchange Derivative Contracts

Interest rate and foreign exchange derivative contracts are utilized in our ALM activities and serve as an efficient tool to manage our interest rate and foreign exchange risk. We use derivatives to hedge the variability in cash flows or changes in fair value on our balance sheet due to interest rate and foreign exchange components. For more information on our hedging activities, see Note 2 – Derivatives to the Consolidated Financial Statements.

Our interest rate contracts are generally non-leveraged generic interest rate and foreign exchange basis swaps, options, futures and forwards. In addition, we use foreign exchange contracts, including cross-currency interest rate swaps, foreign currency futures contracts, foreign currency forward contracts and options to mitigate the foreign exchange risk associated with foreign currency-denominated assets and liabilities.

Changes to the composition of our derivatives portfolio during the nine months ended September 30, 2016 reflect actions taken for interest rate and foreign exchange rate risk management. The decisions to reposition our derivatives portfolio are based on the current assessment of economic and financial conditions including the interest rate and foreign currency environments, balance sheet composition and trends, and the relative mix of our cash and derivative positions.



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Table 56 presents derivatives utilized in our ALM activities including those designated as accounting and economic hedging instruments and shows the notional amount, fair value, weighted-average receive-fixed and pay-fixed rates, expected maturity and average estimated durations of our open ALM derivatives at September 30, 2016 and December 31, 2015. These amounts do not include derivative hedges on our MSRs.

Table 56

## Asset and Liability Management Interest Rate and Foreign Exchange Contracts

(Dollars in millions, average estimated duration in years)	Fair Value	September 30, 2016 Expected Maturity							Average Estimated Duration
		Total	Remainder of 2016	2017	2018	2019	2020	Thereafter	
Receive-fixed interest rate swaps (1)	\$8,882								5.44
Notional amount		\$109,029	\$3,516	\$21,453	\$21,850	\$9,783	\$7,015	\$45,412	
Weighted-average fixed-rate		3.00	% 2.48	% 3.64	% 3.20	% 2.37	% 2.13	% 2.92	%
Pay-fixed interest rate swaps (1)	(215 )								4.16
Notional amount		\$32,973	\$—	\$1,527	\$5,668	\$2,072	\$10,135	\$13,571	
Weighted-average fixed-rate		1.25	% —	% 1.84	% 1.41	% 0.97	% 1.09	% 1.28	%
Same-currency basis swaps (2)	(41 )								
Notional amount		\$68,283	\$8,777	\$20,902	\$11,031	\$6,790	\$1,180	\$19,603	
Foreign exchange basis swaps (1, 3, 4)	(3,621 )								
Notional amount		131,817	6,910	27,992	20,161	12,826	12,895	51,033	
Option products (5) 2									
Notional amount (6)		(134 )	(799 )	650	—	—	—	15	
Foreign exchange contracts (1, 4, 7)	2,362								
Notional amount (6)		(22,863 )	(28,710 )	(4,701 )	230	2,083	(12 )	8,247	
Futures and forward rate contracts 3									
Notional amount (6)		903	903	—	—	—	—	—	
Net ALM contracts	\$7,372								
		December 31, 2015 Expected Maturity							
(Dollars in millions, average estimated duration in years)	Fair Value	Total	2016	2017	2018	2019	2020	Thereafter	Average Estimated Duration
Receive-fixed interest rate swaps (1)	\$6,291								4.98
Notional amount		\$114,354	\$15,339	\$21,453	\$21,850	\$9,783	\$7,015	\$38,914	
		3.12	% 3.12	% 3.64	% 3.20	% 2.37	% 2.13	% 3.16	%

Weighted-average fixed-rate pay-fixed interest rate swaps <sup>(1)</sup>	(81 )								3.98
Notional amount	\$12,131	\$1,025	\$1,527	\$5,668	\$600	\$51	\$3,260		
Weighted-average fixed-rate	1.70	% 1.65	% 1.84	% 1.41	% 1.59	% 3.64	% 2.15	%	
Same-currency basis swaps <sup>(2)</sup>	(70 )								
Notional amount	\$75,224	\$15,692	\$20,833	\$11,026	\$6,786	\$1,180	\$19,707		
Foreign exchange basis swaps <sup>(1, 3, 4)</sup>	(3,968 )								
Notional amount	144,446	25,762	27,441	19,319	12,226	10,572	49,126		
Option products <sup>(5)</sup>	57								
Notional amount <sup>(6)</sup>	752	737	—	—	—	—	15		
Foreign exchange contracts <sup>(1, 4, 7)</sup>	2,345								
Notional amount <sup>(6)</sup>	(25,405 )	(36,504 )	5,380	(2,228 )	2,123	52	5,772		
Futures and forward rate contracts <sup>(5)</sup>	(5 )								
Notional amount <sup>(6)</sup>	200	200	—	—	—	—	—		
Net ALM contracts	\$4,569								

Does not include basis adjustments on either fixed-rate debt issued by the Corporation or AFS debt securities, <sup>(1)</sup> which are hedged using derivatives designated as fair value hedging instruments, that substantially offset the fair values of these derivatives.

At September 30, 2016 and December 31, 2015, the notional amount of same-currency basis swaps included \$68.3 <sup>(2)</sup> billion and \$75.2 billion in both foreign currency and U.S. Dollar-denominated basis swaps in which both sides of the swap are in the same currency.

<sup>(3)</sup> Foreign exchange basis swaps consisted of cross-currency variable interest rate swaps used separately or in conjunction with receive-fixed interest rate swaps.

<sup>(4)</sup> Does not include foreign currency translation adjustments on certain non-U.S. debt issued by the Corporation, that substantially offset the fair values of these derivatives.

The notional amount of option products of \$(134) million at September 30, 2016 was comprised of \$(149) million <sup>(5)</sup> in foreign exchange options and \$15 million in purchased caps/floors. Option products of \$752 million at December 31, 2015 were comprised of \$737 million in foreign exchange options and \$15 million in purchased caps/floors.

<sup>(6)</sup> Reflects the net of long and short positions. Amounts shown as negative reflect a net short position.

The notional amount of foreign exchange contracts of \$(22.9) billion at September 30, 2016 was comprised of \$23.6 billion in foreign currency-denominated and cross-currency receive-fixed swaps, \$(41.5) billion in net foreign currency forward rate contracts, \$(6.3) billion in foreign currency-denominated pay-fixed swaps and \$1.3 <sup>(7)</sup> billion in net foreign currency futures contracts. Foreign exchange contracts of \$(25.4) billion at December 31, 2015 were comprised of \$21.3 billion in foreign currency-denominated and cross-currency receive-fixed swaps, \$(40.3) billion in net foreign currency forward rate contracts, \$(7.6) billion in foreign currency-denominated pay-fixed swaps and \$1.2 billion in foreign currency futures contracts.

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We use interest rate derivative instruments to hedge the variability in the cash flows of our assets and liabilities and other forecasted transactions (collectively referred to as cash flow hedges). The net losses on both open and terminated cash flow hedge derivative instruments recorded in accumulated OCI were \$1.3 billion and \$1.7 billion, on a pretax basis, at September 30, 2016 and December 31, 2015. These net losses are expected to be reclassified into earnings in the same period as the hedged cash flows affect earnings and will decrease income or increase expense on the respective hedged cash flows. Assuming no change in open cash flow derivative hedge positions and no changes in prices or interest rates beyond what is implied in forward yield curves at September 30, 2016, the pretax net losses are expected to be reclassified into earnings as follows: \$392 million, or 31 percent within the next year, 34 percent in years two through five, and 22 percent in years six through ten, with the remaining 13 percent thereafter. For more information on derivatives designated as cash flow hedges, see Note 2 – Derivatives to the Consolidated Financial Statements.

We hedge our net investment in non-U.S. operations determined to have functional currencies other than the U.S. Dollar using forward foreign exchange contracts that typically settle in less than 180 days, cross-currency basis swaps and foreign exchange options. We recorded net after-tax losses on derivatives in accumulated OCI associated with net investment hedges which were offset by gains on our net investments in consolidated non-U.S. entities at September 30, 2016.

### Mortgage Banking Risk Management

We originate, fund and service mortgage loans, which subject us to credit, liquidity and interest rate risks, among others. We determine whether loans will be held-for-investment or held-for-sale at the time of commitment and manage credit and liquidity risks by selling or securitizing a portion of the loans we originate.

Interest rate risk and market risk can be substantial in the mortgage business. Fluctuations in interest rates drive consumer demand for new mortgages and the level of refinancing activity which, in turn, affects total origination and servicing income. Hedging the various sources of interest rate risk in mortgage banking is a complex process that requires complex modeling and ongoing monitoring. Typically, an increase in mortgage interest rates will lead to a decrease in mortgage originations and related fees. IRLCs and the related residential first-mortgage LHFS are subject to interest rate risk between the date of the IRLC and the date the loans are sold to the secondary market, as an increase in mortgage interest rates will typically lead to a decrease in the value of these instruments.

MSRs are nonfinancial assets created when the underlying mortgage loan is sold to investors and we retain the right to service the loan. Typically, an increase in mortgage rates will lead to an increase in the value of the MSRs driven by lower prepayment expectations. This increase in value from increases in mortgage rates is opposite of, and therefore offsets, the risk described for IRLCs and LHFS. Because the interest rate risks of these two hedged items offset, we combine them into one overall hedged item with one combined economic hedge portfolio.

Interest rate and certain market risks of IRLCs and residential mortgage LHFS are economically hedged in combination with MSRs. To hedge these combined assets, we use certain derivatives such as interest rate options, interest rate swaps, forward sale commitments, eurodollar and U.S. Treasury futures, and mortgage TBAs, as well as other securities including agency MBS, principal-only and interest-only MBS and U.S. Treasury securities. For the three and nine months ended September 30, 2016, we recorded gains in mortgage banking income of \$136 million and \$318 million related to the change in fair value of the derivative contracts and other securities used to hedge the market risks of the MSRs, IRLCs and LHFS, net of gains and losses due to changes in fair value of these hedged items, compared to gains of \$86 million and \$309 million for the same periods in 2015. For more information on MSRs, see Note 17 – Mortgage Servicing Rights to the Consolidated Financial Statements and for more information on mortgage banking income, see Consumer Banking on page 18.

Complex Accounting Estimates

Our significant accounting principles, as described in Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K, are essential in understanding the MD&A. Many of our significant accounting principles require complex judgments to estimate the values of assets and liabilities. We have procedures and processes in place to facilitate making these judgments.



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### Fair Value of Financial Instruments

We classify the fair values of financial instruments based on the fair value hierarchy established under applicable accounting guidance which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Applicable accounting guidance establishes three levels of inputs used to measure fair value. For additional information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option to the Consolidated Financial Statements, and Complex Accounting Estimates in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

Financial assets and liabilities, and MSRs where values are based on valuation techniques that require inputs that are both unobservable and are significant to the overall fair value measurement are classified as Level 3 under the fair value hierarchy established in applicable accounting guidance. Level 3 financial assets and liabilities include certain loans, MBS, ABS, collateralized debt obligations, CLOs, structured liabilities and highly structured, complex or long-dated derivative contracts and MSRs. The fair value of these Level 3 financial assets and liabilities and MSRs is determined using pricing models, discounted cash flow methodologies or similar techniques for which the determination of fair value requires significant management judgment or estimation. Total recurring Level 3 assets were \$15.9 billion, or 0.72 percent of total assets, and total recurring Level 3 liabilities were \$8.2 billion, or 0.42 percent of total liabilities, at September 30, 2016 compared to \$18.1 billion or 0.84 percent and \$7.5 billion or 0.40 percent at December 31, 2015.

Level 3 financial instruments may be hedged with derivatives classified as Level 1 or 2; therefore, gains or losses associated with Level 3 financial instruments may be offset by gains or losses associated with financial instruments classified in other levels of the fair value hierarchy. The Level 3 gains and losses recorded in earnings did not have a significant impact on our liquidity or capital. We conduct a review of our fair value hierarchy classifications on a quarterly basis. Transfers into or out of Level 3 are made if the significant inputs used in the financial models measuring the fair values of the assets and liabilities became unobservable or observable, respectively, in the current marketplace. These transfers are considered to be effective as of the beginning of the quarter in which they occur. For more information on the significant transfers into and out of Level 3 during the three and nine months ended September 30, 2016, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements.

For more information, see Complex Accounting Estimates in the MD&A of the Corporation's 2015 Annual Report on Form 10-K.

### Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

See Market Risk Management on page 84 in the MD&A and the sections referenced therein for Quantitative and Qualitative Disclosures about Market Risk.

### Item 4. CONTROLS AND PROCEDURES

#### Disclosure Controls and Procedures

As of the end of the period covered by this report, the Corporation's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness and design of the Corporation's disclosure controls and procedures (as that term is defined in Rule 13a-15(e) of the Securities Exchange Act of 1934). Based upon that evaluation, the Corporation's Chief Executive Officer and Chief Financial Officer concluded that the Corporation's disclosure controls and procedures were effective, as of the end of the period covered by this report, in recording, processing, summarizing and reporting information required to be disclosed by the Corporation in reports that it files or submits under the Exchange Act, within the time periods specified in the Securities and Exchange

Commission's rules and forms.

#### Changes in Internal Control Over Financial Reporting

There have been no changes in the Corporation's internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) during the three months ended September 30, 2016, that have materially affected, or are reasonably likely to materially affect, the Corporation's internal control over financial reporting.

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## Part I. FINANCIAL INFORMATION

## Item 1. FINANCIAL STATEMENTS

## Bank of America Corporation and Subsidiaries

## Consolidated Statement of Income

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions, except per share information)	2016	2015	2016	2015
Interest income				
Loans and leases	\$8,358	\$ 7,965	\$24,837	\$ 23,912
Debt securities	2,144	2,268	6,922	6,726
Federal funds sold and securities borrowed or purchased under agreements to resell	267	275	803	774
Trading account assets	1,076	1,134	3,330	3,291
Other interest income	765	754	2,300	2,221
Total interest income	12,610	12,396	38,192	36,924
Interest expense				
Deposits	266	214	736	650
Short-term borrowings	569	597	1,808	1,868
Trading account liabilities	244	342	778	1,071
Long-term debt	1,330	1,343	4,066	4,063
Total interest expense	2,409	2,496	7,388	7,652
Net interest income	10,201	9,900	30,804	29,272
Noninterest income				
Card income	1,455	1,510	4,349	4,381
Service charges	1,952	1,898	5,660	5,519
Investment and brokerage services	3,160	3,336	9,543	10,101
Investment banking income	1,458	1,287	4,019	4,300
Trading account profits	2,141	1,616	5,821	5,510
Mortgage banking income	589	407	1,334	2,102
Gains on sales of debt securities	51	437	490	886
Other income	628	601	1,691	1,312
Total noninterest income	11,434	11,092	32,907	34,111
Total revenue, net of interest expense	21,635	20,992	63,711	63,383
Provision for credit losses	850	806	2,823	2,351
Noninterest expense				
Personnel	7,704	7,829	24,278	25,333
Occupancy	1,005	1,028	3,069	3,082
Equipment	443	499	1,357	1,511
Marketing	410	445	1,243	1,330
Professional fees	536	673	1,433	1,588
Amortization of intangibles	181	207	554	632
Data processing	685	731	2,240	2,298
Telecommunications	189	210	551	583
Other general operating	2,328	2,317	7,065	7,367

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Total noninterest expense	13,481	13,939	41,790	43,724
Income before income taxes	7,304	6,247	19,098	17,308
Income tax expense	2,349	1,628	5,888	4,756
Net income	\$4,955	\$ 4,619	\$13,210	\$ 12,552
Preferred stock dividends	503	441	1,321	1,153
Net income applicable to common shareholders	\$4,452	\$ 4,178	\$11,889	\$ 11,399
Per common share information				
Earnings	\$0.43	\$ 0.40	\$1.15	\$ 1.09
Diluted earnings	0.41	0.38	1.10	1.03
Dividends paid	0.075	0.05	0.175	0.15
Average common shares issued and outstanding (in thousands)	10,250,124	10,444,291	10,312,878	10,483,466
Average diluted common shares issued and outstanding (in thousands)	11,000,473	11,197,203	11,046,807	11,234,125
See accompanying Notes to Consolidated Financial Statements.				

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Consolidated Statement of Comprehensive Income

	Three Months		Nine Months	
	Ended		Ended September	
	September 30		30	
(Dollars in millions)	2016	2015	2016	2015
Net income	\$4,955	\$4,619	\$13,210	\$12,552
Other comprehensive income, net-of-tax:				
Net change in debt and marketable equity securities	208	1,211	3,319	167
Net change in debit valuation adjustments	(65 )	187	49	633
Net change in derivatives	127	127	277	416
Employee benefit plan adjustments	6	27	29	77
Net change in foreign currency translation adjustments	(8 )	(76 )	(17 )	(84 )
Other comprehensive income	268	1,476	3,657	1,209
Comprehensive income	\$5,223	\$6,095	\$16,867	\$13,761

See accompanying Notes to Consolidated Financial Statements.

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## Bank of America Corporation and Subsidiaries

## Consolidated Balance Sheet

(Dollars in millions)	September 30 2016	December 31 2015
Assets		
Cash and due from banks	\$ 26,701	\$ 31,265
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	116,733	128,088
Cash and cash equivalents	143,434	159,353
Time deposits placed and other short-term investments	8,506	7,744
Federal funds sold and securities borrowed or purchased under agreements to resell (includes \$51,638 and \$55,143 measured at fair value)	218,810	192,482
Trading account assets (includes \$103,042 and \$107,776 pledged as collateral)	187,849	176,527
Derivative assets	47,896	49,990
Debt securities:		
Carried at fair value (includes \$29,903 and \$29,810 pledged as collateral)	322,505	322,380
Held-to-maturity, at cost (fair value – \$113,965 and \$84,046; \$8,316 and \$9,074 pledged as collateral)	112,409	84,508
Total debt securities	434,914	406,888
Loans and leases (includes \$8,108 and \$6,938 measured at fair value and \$32,008 and \$37,767 pledged as collateral)	905,008	896,983
Allowance for loan and lease losses	(11,692)	(12,234)
Loans and leases, net of allowance	893,316	884,749
Premises and equipment, net	9,133	9,485
Mortgage servicing rights (includes \$2,477 and \$3,087 measured at fair value)	2,477	3,087
Goodwill	69,744	69,761
Intangible assets	3,168	3,768
Loans held-for-sale (includes \$4,652 and \$4,818 measured at fair value)	10,586	7,453
Customer and other receivables	54,116	58,312
Other assets (includes \$13,891 and \$14,320 measured at fair value)	111,365	114,688
Total assets	\$ 2,195,314	\$ 2,144,287

Assets of consolidated variable interest entities included in total assets above (isolated to settle the liabilities of the variable interest entities)

Trading account assets	\$ 5,699	\$ 6,344
Loans and leases	57,826	72,946
Allowance for loan and lease losses	(1,085)	(1,320)
Loans and leases, net of allowance	56,741	71,626
Loans held-for-sale	209	284
All other assets	1,467	1,530
Total assets of consolidated variable interest entities	\$ 64,116	\$ 79,784

See accompanying Notes to Consolidated Financial Statements.

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## Bank of America Corporation and Subsidiaries

## Consolidated Balance Sheet (continued)

(Dollars in millions)	September 30 2016	December 31 2015
<b>Liabilities</b>		
Deposits in U.S. offices:		
Noninterest-bearing	\$ 431,418	\$ 422,237
Interest-bearing (includes \$913 and \$1,116 measured at fair value)	728,498	703,761
Deposits in non-U.S. offices:		
Noninterest-bearing	11,596	9,916
Interest-bearing	61,383	61,345
Total deposits	1,232,895	1,197,259
Federal funds purchased and securities loaned or sold under agreements to repurchase (includes \$31,868 and \$24,574 measured at fair value)	178,195	174,291
Trading account liabilities	76,998	66,963
Derivative liabilities	43,484	38,450
Short-term borrowings (includes \$1,055 and \$1,325 measured at fair value)	26,889	28,098
Accrued expenses and other liabilities (includes \$15,813 and \$13,899 measured at fair value and \$767 and \$646 of reserve for unfunded lending commitments)	141,634	146,286
Long-term debt (includes \$32,619 and \$30,097 measured at fair value)	225,136	236,764
Total liabilities	1,925,231	1,888,111
Commitments and contingencies (Note 6 – Securitizations and Other Variable Interest Entities, Note 7 – Representations and Warranties Obligations and Corporate Guarantees and Note 10 – Commitments and Contingencies)		
<b>Shareholders' equity</b>		
Preferred stock, \$0.01 par value; authorized – 100,000,000 shares; issued and outstanding 3,887,439 and 3,767,790 shares	25,220	22,273
Common stock and additional paid-in capital, \$0.01 par value; authorized – 12,800,000,000 shares; issued and outstanding – 10,123,845,121 and 10,380,265,063 shares	148,261	151,042
Retained earnings	98,303	88,219
Accumulated other comprehensive income (loss)	(1,701	) (5,358 )
Total shareholders' equity	270,083	256,176
Total liabilities and shareholders' equity	\$ 2,195,314	\$ 2,144,287
<b>Liabilities of consolidated variable interest entities included in total liabilities above</b>		
Short-term borrowings	\$ 546	\$ 681
Long-term debt (includes \$10,531 and \$11,304 of non-recourse debt)	11,209	14,073
All other liabilities (includes \$35 and \$20 of non-recourse liabilities)	38	21
Total liabilities of consolidated variable interest entities	\$ 11,793	\$ 14,775
See accompanying Notes to Consolidated Financial Statements.		

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## Bank of America Corporation and Subsidiaries

## Consolidated Statement of Changes in Shareholders' Equity

	Preferred Stock	Common Stock and Additional Capital Shares	Paid-in Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
(Dollars in millions, shares in thousands)						
Balance, December 31, 2014	\$ 19,309	10,516,542	\$ 153,458	\$ 74,731	\$ (4,022 )	\$ 243,476
Cumulative adjustment for accounting change related to debit valuation adjustments				1,226	(1,226 )	—
Net income				12,552		12,552
Net change in debt and marketable equity securities					167	167
Net change in debit valuation adjustments					633	633
Net change in derivatives					416	416
Employee benefit plan adjustments					77	77
Net change in foreign currency translation adjustments					(84 )	(84 )
Dividends declared:						
Common				(1,570 )		(1,570 )
Preferred				(1,153 )		(1,153 )
Issuance of preferred stock	2,964					2,964
Common stock issued under employee plans and related tax effects		3,983	(42 )			(42 )
Common stock repurchased		(93,220 )	(1,575 )			(1,575 )
Balance, September 30, 2015	\$ 22,273	10,427,305	\$ 151,841	\$ 85,786	\$ (4,039 )	\$ 255,861
Balance, December 31, 2015	\$ 22,273	10,380,265	\$ 151,042	\$ 88,219	\$ (5,358 )	\$ 256,176
Net income				13,210		13,210
Net change in debt and marketable equity securities					3,319	3,319
Net change in debit valuation adjustments					49	49
Net change in derivatives					277	277
Employee benefit plan adjustments					29	29
Net change in foreign currency translation adjustments					(17 )	(17 )
Dividends declared:						
Common				(1,805 )		(1,805 )
Preferred				(1,321 )		(1,321 )
Issuance of preferred stock	2,947					2,947
Common stock issued under employee plans and related tax effects		5,082	1,001			1,001
Common stock repurchased		(261,502 )	(3,782 )			(3,782 )
Balance, September 30, 2016	\$ 25,220	10,123,845	\$ 148,261	\$ 98,303	\$ (1,701 )	\$ 270,083

See accompanying Notes to Consolidated Financial Statements.



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Consolidated Statement of Cash Flows

	Nine Months Ended September 30	
(Dollars in millions)	2016	2015
Operating activities		
Net income	\$ 13,210	\$ 12,552
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Provision for credit losses	2,823	2,351
Gains on sales of debt securities	(490	) (886
Realized debit valuation adjustments on structured liabilities	18	545
Depreciation and amortization of premises and equipment	1,138	1,174
Amortization of intangibles	554	632
Net amortization of premium/discount on debt securities	2,203	1,438
Deferred income taxes	5,072	2,590
Stock-based compensation	1,087	17
Loans held-for-sale:		
Originations and purchases	(24,154	) (29,731
Proceeds from sales and paydowns of loans originally classified as held-for-sale	21,068	27,726
Net change in:		
Trading and derivative instruments	9,068	8,016
Other assets	(612	) (1,140
Accrued expenses and other liabilities	(4,845	) (1,637
Other operating activities, net	522	(938
Net cash provided by operating activities	26,662	22,709
Investing activities		
Net change in:		
Time deposits placed and other short-term investments	(762	) 1,289
Federal funds sold and securities borrowed or purchased under agreements to resell	(26,328	) (14,858
Debt securities carried at fair value:		
Proceeds from sales	73,252	101,880
Proceeds from paydowns and maturities	75,833	60,791
Purchases	(156,537	) (151,991
Held-to-maturity debt securities:		
Proceeds from paydowns and maturities	12,827	10,129
Purchases	(29,085	) (16,260
Loans and leases:		
Proceeds from sales	14,870	20,399
Purchases	(9,347	) (9,240
Other changes in loans and leases, net	(17,832	) (33,863
Other investing activities, net	109	(1,029
Net cash used in investing activities	(63,000	) (32,753
Financing activities		
Net change in:		
Deposits	35,636	43,073
Federal funds purchased and securities loaned or sold under agreements to repurchase	3,904	(2,039
Short-term borrowings	(1,069	) 3,346
Long-term debt:		
Proceeds from issuance	24,681	33,956

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Retirement of long-term debt	(41,458 )	(34,583 )
Proceeds from issuance of preferred stock	2,947	2,964
Common stock repurchased	(3,782 )	(1,575 )
Cash dividends paid	(3,031 )	(2,724 )
Excess tax benefits on share-based payments	11	16
Other financing activities, net	(14 )	(30 )
Net cash provided by financing activities	17,825	42,404
Effect of exchange rate changes on cash and cash equivalents	2,594	(523 )
Net increase (decrease) in cash and cash equivalents	(15,919 )	31,837
Cash and cash equivalents at January 1	159,353	138,589
Cash and cash equivalents at September 30	\$143,434	\$170,426
See accompanying Notes to Consolidated Financial Statements.		

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Bank of America Corporation and Subsidiaries  
Notes to Consolidated Financial Statements

### NOTE 1 – Summary of Significant Accounting Principles

Bank of America Corporation, a bank holding company and a financial holding company, provides a diverse range of financial services and products throughout the U.S. and in certain international markets. The term "the Corporation" as used herein may refer to Bank of America Corporation individually, Bank of America Corporation and its subsidiaries, or certain of Bank of America Corporation's subsidiaries or affiliates.

#### Principles of Consolidation and Basis of Presentation

The Consolidated Financial Statements include the accounts of the Corporation and its majority-owned subsidiaries, and those variable interest entities (VIEs) where the Corporation is the primary beneficiary. Intercompany accounts and transactions have been eliminated. Results of operations of acquired companies are included from the dates of acquisition and for VIEs, from the dates that the Corporation became the primary beneficiary. Assets held in an agency or fiduciary capacity are not included in the Consolidated Financial Statements. The Corporation accounts for investments in companies for which it owns a voting interest and for which it has the ability to exercise significant influence over operating and financing decisions using the equity method of accounting. These investments are included in other assets. Equity method investments are subject to impairment testing and the Corporation's proportionate share of income or loss is included in other income.

The preparation of the Consolidated Financial Statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect reported amounts and disclosures. Realized results could differ from those estimates and assumptions.

The Corporation's Annual Report on Form 10-K for the year ended December 31, 2015 as supplemented by a Current Report on Form 8-K filed on August 1, 2016 to reflect reclassified business segment information is referred to herein as the 2015 Annual Report on Form 10-K.

These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

The nature of the Corporation's business is such that the results of any interim period are not necessarily indicative of results for a full year. In the opinion of management, all adjustments, which consist of normal recurring adjustments necessary for a fair statement of the interim period results have been made. The Corporation evaluates subsequent events through the date of filing with the Securities and Exchange Commission (SEC). Certain prior-period amounts have been reclassified to conform to current period presentation.

#### Change in Accounting Method

Effective July 1, 2016, the Corporation changed its accounting method under the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 310-20, Nonrefundable fees and other costs, from the prepayment method (also referred to as the retrospective method) to the contractual method.

Under the prepayment method, the Corporation's amortization of premiums and accretion of discounts related to certain debt securities was based on estimated principal prepayment assumptions on individual debt securities each reporting period. Prepayment experience, which is largely driven by interest rates, is continually evaluated to determine the estimated lives of the securities. When a change is made to the estimated lives of the securities, the

related premium or discount is adjusted with a corresponding charge or benefit to interest income as if the current estimated lives had been applied since the acquisition of the securities. Accordingly, the application of the prepayment method results in a cumulative catch-up adjustment in each period, recorded in interest income.

Under the contractual method, premiums and discounts on debt securities are amortized and accreted at a constant effective yield, and no assumption is made concerning prepayments. The cumulative catch-up adjustment that occurs under the prepayment method is therefore not required under the contractual method. Instead, as principal prepayments occur, the contractual method requires the acceleration of a portion of the unamortized premium or discount be recorded in interest income such that the effective yield of the debt security remains constant throughout the life of the debt security.

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The Corporation believes that the contractual method is the preferable method of accounting because it is consistent with the accounting method used by peer institutions in terms of net interest income, an important element in the statement of income. Additionally, the contractual method better aligns with the Corporation's asset and liability (ALM) strategy which acts to mitigate the risk that market conditions may adversely impact the value of the Corporation's assets and liabilities, and its financial results.

Adoption of the contractual method of accounting is a voluntary change required to be adopted retrospectively. Therefore all prior periods presented herein have been restated to conform to the current period presentation. The following Notes have been impacted by the change in accounting method: Note 3 – Securities, Note 12 – Accumulated Other Comprehensive Income (Loss), Note 13 – Earnings Per Common Share and Note 18 – Business Segment Information.

The following is the impact of the change in accounting method on the three and six months ended June 30, 2016, and the 2015 periods presented in the consolidated financial statements herein. The impact is expressed as an increase / (decrease) as compared to amounts originally reported. For the three and six months ended June 30, 2016: net interest income — \$905 million and \$2.2 billion, gains on sales of debt securities — \$(18) million and \$(54) million, and net income — \$551 million, or \$0.05 per diluted share, and \$1.3 billion, or \$0.13 per diluted share, respectively. For the three and nine months ended September 30, 2015: net interest income — \$429 million and \$(71) million, gains on sales of debt securities — \$52 million and \$65 million, and net income — \$298 million, or \$0.03 per diluted share, and \$0, or \$0.00 per diluted share, respectively. The change in accounting method decreased retained earnings \$293 million at January 1, 2015. Since the change in accounting method was effective July 1, 2016 and the financial results under the prepayment method as compared to the contractual method would not affect future management decisions, the Corporation did not undertake the operational effort and cost to maintain separate systems of record for the prepayment method to enable a calculation of the impact of the change subsequent to the effective date. As a result, the impact of the change in accounting method for the three and nine months ended September 30, 2016 is not disclosed.

### New Accounting Pronouncements

In August 2016, the FASB issued new accounting guidance that addresses classification of certain cash receipts and cash payments in the statement of cash flows. The new guidance is effective on January 1, 2018, on a retrospective basis, with early adoption permitted. This new accounting guidance will result in some changes in classification in the Consolidated Statement of Cash Flows, which the Corporation does not expect will be significant, and will not have any impact on its consolidated financial position or results of operations.

In June 2016, the FASB issued new accounting guidance that will require the earlier recognition of credit losses on loans and other financial instruments based on an expected loss model, replacing the incurred loss model that is currently in use. Under the new guidance, an entity will measure all expected credit losses for financial instruments held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. The expected loss model will apply to loans and leases, unfunded lending commitments, held-to-maturity (HTM) debt securities and other debt instruments measured at amortized cost. The impairment model for available-for-sale (AFS) debt securities will require the recognition of credit losses through a valuation allowance when fair value is less than amortized cost, regardless of whether the impairment is considered to be other-than-temporary. The new guidance is effective on January 1, 2020, with early adoption permitted on January 1, 2019. The Corporation is in the process of evaluating the impact of the provisions of this new accounting guidance, which at the date of adoption will increase the allowance for credit losses with a resulting negative adjustment to retained earnings.

In March 2016, the FASB issued new accounting guidance that simplifies certain aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or

liabilities, and classification on the statement of cash flows. The new guidance is effective on January 1, 2017, with early adoption permitted. The Corporation does not expect the provisions of this new accounting guidance to have a material impact on its consolidated financial position or results of operations.

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In February 2016, the FASB issued new accounting guidance that requires substantially all leases to be recorded as assets and liabilities on the balance sheet. This new accounting guidance is effective on January 1, 2019, with early adoption permitted. Upon adoption, the Corporation will record a right of use asset and a lease payment obligation associated with arrangements previously accounted for as operating leases. The Corporation is in the process of evaluating the impact of the provisions of this new accounting guidance on its consolidated financial position, but does not expect the new accounting guidance to have a material impact on its consolidated financial position or results of operations.

In January 2016, the FASB issued new accounting guidance on recognition and measurement of financial instruments. The new guidance makes targeted changes to existing GAAP including, among other provisions, requiring certain equity investments to be measured at fair value with changes in fair value reported in earnings and requiring changes in instrument-specific credit risk (i.e., debit valuation adjustments (DVA)) for financial liabilities recorded at fair value under the fair value option to be reported in OCI. The accounting for DVA related to other financial liabilities, for example, derivatives, does not change. The new guidance is effective on January 1, 2018, with early adoption permitted for the provisions related to DVA. In 2015, the Corporation early adopted, retrospective to January 1, 2015, the provisions of this new accounting guidance related to DVA on financial liabilities accounted for under the fair value option. The Corporation does not expect the provisions of this new accounting guidance other than those related to DVA, as described above, to have a material impact on its consolidated financial position or results of operations.

In May 2014, the FASB issued new accounting guidance to clarify the principles for recognizing revenue from contracts with customers. This new accounting guidance, which does not apply to financial instruments, is effective on January 1, 2018. The Corporation does not expect the provisions of this new accounting guidance to have a material impact on its consolidated financial position or results of operations.

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## NOTE 2 – Derivatives

## Derivative Balances

Derivatives are entered into on behalf of customers, for trading, or to support risk management activities. Derivatives used in risk management activities include derivatives that may or may not be designated in qualifying hedge accounting relationships. Derivatives that are not designated in qualifying hedge accounting relationships are referred to as other risk management derivatives. For more information on the Corporation's derivatives and hedging activities, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K. The following tables present derivative instruments included on the Consolidated Balance Sheet in derivative assets and liabilities at September 30, 2016 and December 31, 2015. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total derivative assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements and have been reduced by the cash collateral received or paid.

(Dollars in billions)	September 30, 2016						
	Contract/ Notional (1)	Gross Derivative Assets			Gross Derivative Liabilities		
		Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total
Interest rate contracts							
Swaps	\$17,341.7	\$548.5	\$ 10.0	\$558.5	\$548.0	\$ 0.8	\$548.8
Futures and forwards	6,196.4	1.3	—	1.3	1.3	—	1.3
Written options	1,287.7	—	—	—	73.4	—	73.4
Purchased options	1,343.3	73.5	—	73.5	—	—	—
Foreign exchange contracts							
Swaps	1,949.9	41.4	1.2	42.6	44.3	2.9	47.2
Spot, futures and forwards	4,191.7	41.1	1.5	42.6	41.1	0.8	41.9
Written options	376.2	—	—	—	8.0	—	8.0
Purchased options	355.0	7.6	—	7.6	—	—	—
Equity contracts							
Swaps	194.4	3.1	—	3.1	3.5	—	3.5
Futures and forwards	79.7	1.6	—	1.6	1.1	—	1.1
Written options	463.2	—	—	—	25.7	—	25.7
Purchased options	417.9	24.9	—	24.9	—	—	—
Commodity contracts							
Swaps	48.9	2.8	—	2.8	5.3	—	5.3
Futures and forwards	50.5	3.5	—	3.5	0.4	—	0.4
Written options	36.0	—	—	—	2.6	—	2.6
Purchased options	35.7	2.5	—	2.5	—	—	—
Credit derivatives							
Purchased credit derivatives:							
Credit default swaps	811.8	9.1	—	9.1	13.1	—	13.1
Total return swaps/other	31.5	0.2	—	0.2	1.7	—	1.7
Written credit derivatives:							
Credit default swaps	803.2	13.4	—	13.4	8.2	—	8.2



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Total return swaps/other	43.2	1.2	—	1.2	0.4	—	0.4
Gross derivative assets/liabilities		\$775.7	\$ 12.7	\$788.4	\$778.1	\$ 4.5	\$782.6
Less: Legally enforceable master netting agreements				(694.0 )			(694.0 )
Less: Cash collateral received/paid				(46.5 )			(45.1 )
Total derivative assets/liabilities				\$47.9			\$43.5

(1) Represents the total contract/notional amount of derivative assets and liabilities outstanding.

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(Dollars in billions)	December 31, 2015						
	Contract/ Notional (1, 2)	Gross Derivative Assets			Gross Derivative Liabilities		
		Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total
Interest rate contracts							
Swaps	\$21,706.8	\$439.6	\$ 7.4	\$447.0	\$440.8	\$ 1.2	\$442.0
Futures and forwards	6,237.6	1.1	—	1.1	1.3	—	1.3
Written options	1,313.8	—	—	—	57.6	—	57.6
Purchased options	1,393.3	58.9	—	58.9	—	—	—
Foreign exchange contracts							
Swaps	2,149.9	49.2	0.9	50.1	52.2	2.8	55.0
Spot, futures and forwards	4,104.3	46.0	1.2	47.2	45.8	0.3	46.1
Written options	467.2	—	—	—	10.6	—	10.6
Purchased options	439.9	10.2	—	10.2	—	—	—
Equity contracts							
Swaps	201.2	3.3	—	3.3	3.8	—	3.8
Futures and forwards	72.8	2.1	—	2.1	1.2	—	1.2
Written options	347.6	—	—	—	21.1	—	21.1
Purchased options	320.3	23.8	—	23.8	—	—	—
Commodity contracts							
Swaps	47.0	4.7	—	4.7	7.1	—	7.1
Futures and forwards	45.6	3.8	—	3.8	0.7	—	0.7
Written options	36.6	—	—	—	4.4	—	4.4
Purchased options	37.4	4.2	—	4.2	—	—	—
Credit derivatives							
Purchased credit derivatives:							
Credit default swaps	928.3	14.4	—	14.4	14.8	—	14.8
Total return swaps/other	26.4	0.2	—	0.2	1.9	—	1.9
Written credit derivatives:							
Credit default swaps	924.1	15.3	—	15.3	13.1	—	13.1
Total return swaps/other	39.7	2.3	—	2.3	0.4	—	0.4
Gross derivative assets/liabilities		\$679.1	\$ 9.5	\$688.6	\$676.8	\$ 4.3	\$681.1
Less: Legally enforceable master netting agreements (2)				(596.7 )			(596.7 )
Less: Cash collateral received/paid				(41.9 )			(45.9 )
Total derivative assets/liabilities				\$50.0			\$38.5

(1) Represents the total contract/notional amount of derivative assets and liabilities outstanding.

(2) The notional amount for certain derivatives has been reduced to reflect the impact of legally closed positions, which had no impact on the net fair value.

## Offsetting of Derivatives

The Corporation enters into International Swaps and Derivatives Association, Inc. (ISDA) master netting agreements or similar agreements with substantially all of the Corporation's derivative counterparties. Where legally enforceable, these master netting agreements give the Corporation, in the event of default by the counterparty, the right to liquidate

securities held as collateral and to offset receivables and payables with the same counterparty. For purposes of the Consolidated Balance Sheet, the Corporation offsets derivative assets and liabilities and cash collateral held with the same counterparty where it has such a legally enforceable master netting agreement.

The Offsetting of Derivatives table presents derivative instruments included in derivative assets and liabilities on the Consolidated Balance Sheet at September 30, 2016 and December 31, 2015 by primary risk (e.g., interest rate risk) and the platform, where applicable, on which these derivatives are transacted. Exchange-traded derivatives include listed options transacted on an exchange. Over-the-counter (OTC) derivatives include bilateral transactions between the Corporation and a particular counterparty. OTC-cleared derivatives include bilateral transactions between the Corporation and a counterparty where the transaction is cleared through a clearinghouse. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total gross derivative assets and liabilities

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are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements which includes reducing the balance for counterparty netting and cash collateral received or paid.

Other gross derivative assets and liabilities in the table represent derivatives entered into under master netting agreements where uncertainty exists as to the enforceability of these agreements under bankruptcy laws in some countries or industries and, accordingly, receivables and payables with counterparties in these countries or industries are reported on a gross basis.

Also included in the table is financial instruments collateral related to legally enforceable master netting agreements that represents securities collateral received or pledged and cash and securities collateral held and posted at third-party custodians. These amounts are not offset on the Consolidated Balance Sheet but are shown as a reduction to total derivative assets and liabilities in the table to derive net derivative assets and liabilities.

For more information on offsetting of securities financing agreements, see Note 9 – Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings.

## Offsetting of Derivatives

(Dollars in billions)	September 30, 2016		December 31, 2015	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
Interest rate contracts				
Over-the-counter	\$370.8	\$359.1	\$309.3	\$297.2
Over-the-counter cleared	258.5	259.8	197.0	201.7
Foreign exchange contracts				
Over-the-counter	89.5	94.0	103.2	107.5
Over-the-counter cleared	0.4	0.3	0.1	0.1
Equity contracts				
Over-the-counter	15.1	13.5	16.6	14.0
Exchange-traded <sup>(1)</sup>	11.6	14.3	10.0	9.2
Commodity contracts				
Over-the-counter	4.1	5.4	7.3	8.9
Exchange-traded <sup>(1)</sup>	1.3	1.4	1.8	1.8
Over-the-counter cleared	—	—	0.1	0.1
Credit derivatives				
Over-the-counter	17.3	17.0	24.6	22.9
Over-the-counter cleared	5.9	5.8	6.5	6.4
Total gross derivative assets/liabilities, before netting				
Over-the-counter	496.8	489.0	461.0	450.5
Exchange-traded <sup>(1)</sup>	12.9	15.7	11.8	11.0
Over-the-counter cleared	264.8	265.9	203.7	208.3
Less: Legally enforceable master netting agreements and cash collateral received/paid				
Over-the-counter	(466.4)	(463.6)	(426.6)	(425.7)
Exchange-traded <sup>(1)</sup>	(9.7)	(9.7)	(8.7)	(8.7)
Over-the-counter cleared	(264.4)	(265.8)	(203.3)	(208.2)
Derivative assets/liabilities, after netting	34.0	31.5	37.9	27.2
Other gross derivative assets/liabilities	13.9	12.0	12.1	11.3
Total derivative assets/liabilities	47.9	43.5	50.0	38.5

Less: Financial instruments collateral <sup>(2)</sup>	(14.6 )	(14.1 )	(13.9 )	(6.5 )
Total net derivative assets/liabilities	\$33.3	\$ 29.4	\$36.1	\$ 32.0

- (1) The notional amount for certain derivatives has been reduced to reflect the impact of legally closed positions, which had no impact on the net fair value.
- (2) These amounts are limited to the derivative asset/liability balance and, accordingly, do not include excess collateral received/pledged.

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ALM and Risk Management Derivatives

The Corporation's ALM and risk management activities include the use of derivatives to mitigate risk to the Corporation including derivatives designated in qualifying hedge accounting relationships and derivatives used in other risk management activities. Interest rate, foreign exchange, equity, commodity and credit contracts are utilized in the Corporation's ALM and risk management activities.

The Corporation maintains an overall interest rate risk management strategy that incorporates the use of interest rate contracts, which are generally non-leveraged generic interest rate and basis swaps, options, futures and forwards, to minimize significant fluctuations in earnings caused by interest rate volatility. The Corporation's goal is to manage interest rate sensitivity and volatility so that movements in interest rates do not significantly adversely affect earnings or capital. As a result of interest rate fluctuations, hedged fixed-rate assets and liabilities appreciate or depreciate in fair value. Gains or losses on the derivative instruments that are linked to the hedged fixed-rate assets and liabilities are expected to substantially offset this unrealized appreciation or depreciation.

Market risk, including interest rate risk, can be substantial in the mortgage business. Market risk is the risk that values of mortgage assets or revenues will be adversely affected by changes in market conditions such as interest rate movements. To mitigate the interest rate risk in mortgage banking production income, the Corporation utilizes forward loan sale commitments and other derivative instruments, including purchased options, and certain debt securities. The Corporation also utilizes derivatives such as interest rate options, interest rate swaps, forward settlement contracts and eurodollar futures to hedge certain market risks of mortgage servicing rights (MSRs). For more information on MSRs, see Note 17 – Mortgage Servicing Rights.

The Corporation uses foreign exchange contracts to manage the foreign exchange risk associated with certain foreign currency-denominated assets and liabilities, as well as the Corporation's investments in non-U.S. subsidiaries. Foreign exchange contracts, which include spot and forward contracts, represent agreements to exchange the currency of one country for the currency of another country at an agreed-upon price on an agreed-upon settlement date. Exposure to loss on these contracts will increase or decrease over their respective lives as currency exchange and interest rates fluctuate.

The Corporation enters into derivative commodity contracts such as futures, swaps, options and forwards as well as non-derivative commodity contracts to provide price risk management services to customers or to manage price risk associated with its physical and financial commodity positions. The non-derivative commodity contracts and physical inventories of commodities expose the Corporation to earnings volatility. Fair value accounting hedges provide a method to mitigate a portion of this earnings volatility.

The Corporation purchases credit derivatives to manage credit risk related to certain funded and unfunded credit exposures. Credit derivatives include credit default swaps (CDS), total return swaps and swaptions. These derivatives are recorded on the Consolidated Balance Sheet at fair value with changes in fair value recorded in other income.

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## Derivatives Designated as Accounting Hedges

The Corporation uses various types of interest rate, commodity and foreign exchange derivative contracts to protect against changes in the fair value of its assets and liabilities due to fluctuations in interest rates, commodity prices and exchange rates (fair value hedges). The Corporation also uses these types of contracts and equity derivatives to protect against changes in the cash flows of its assets and liabilities, and other forecasted transactions (cash flow hedges). The Corporation hedges its net investment in consolidated non-U.S. operations determined to have functional currencies other than the U.S. Dollar using forward exchange contracts and cross-currency basis swaps, and by issuing foreign currency-denominated debt (net investment hedges).

## Fair Value Hedges

The table below summarizes information related to fair value hedges for the three and nine months ended September 30, 2016 and 2015, including hedges of interest rate risk on long-term debt that were acquired as part of a business combination and redesignated at that time. At redesignation, the fair value of the derivatives was positive. As the derivatives mature, the fair value will approach zero. As a result, ineffectiveness will occur and the fair value changes in the derivatives and the long-term debt being hedged may be directionally the same in certain scenarios. Based on a regression analysis, the derivatives continue to be highly effective at offsetting changes in the fair value of the long-term debt attributable to interest rate risk.

## Derivatives Designated as Fair Value Hedges

Gains (Losses)	Three Months Ended September 30, 2016			Nine Months Ended September 30, 2016		
	Derivative	Hedged Item	Hedge Ineffectiveness	Derivative	Hedged Item	Hedge Ineffectiveness
(Dollars in millions)						
Interest rate risk on long-term debt <sup>(1)</sup>	\$ (758 )	\$ 580	\$ (178 )	\$ 3,166	\$ (3,654)	\$ (488 )
Interest rate and foreign currency risk on long-term debt <sup>(1)</sup>	16	(10 )	6	360	(369 )	(9 )
Interest rate risk on available-for-sale securities <sup>(2)</sup>	235	(250 )	(15 )	(131 )	80	(51 )
Price risk on commodity inventory <sup>(3)</sup>	6	(6 )	—	—	—	—
Total	\$ (501 )	\$ 314	\$ (187 )	\$ 3,395	\$ (3,943)	\$ (548 )
Interest rate risk on long-term debt <sup>(1)</sup>	\$ 1,921	\$ (2,111)	\$ (190 )	\$ 724	\$ (1,362)	\$ (638 )
Interest rate and foreign currency risk on long-term debt <sup>(1)</sup>	(138 )	125	(13 )	(1,394 )	1,311	(83 )
Interest rate risk on available-for-sale securities <sup>(2)</sup>	(6 )	(1 )	(7 )	39	(49 )	(10 )
Price risk on commodity inventory <sup>(3)</sup>	2	(2 )	—	15	(11 )	4
Total	\$ 1,779	\$ (1,989)	\$ (210 )	\$ (616 )	\$ (111 )	\$ (727 )

<sup>(1)</sup> Amounts are recorded in interest expense on long-term debt and in other income.

<sup>(2)</sup> Amounts are recorded in interest income on debt securities.

<sup>(3)</sup> Amounts relating to commodity inventory are recorded in trading account profits.

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## Cash Flow and Net Investment Hedges

The table below summarizes certain information related to cash flow hedges and net investment hedges for the three and nine months ended September 30, 2016 and 2015. Of the \$800 million after-tax net loss (\$1.3 billion on a pretax basis) on derivatives in accumulated OCI at September 30, 2016, \$245 million after-tax (\$392 million on a pretax basis) is expected to be reclassified into earnings in the next 12 months. These net losses reclassified into earnings are expected to primarily reduce net interest income related to the respective hedged items. Amounts related to price risk on restricted stock awards reclassified from accumulated OCI are recorded in personnel expense. For terminated cash flow hedges, the time period over which substantially all of the forecasted transactions are hedged is approximately seven years, with a maximum length of time for certain forecasted transactions of 20 years.

## Derivatives Designated as Cash Flow and Net Investment Hedges

(Dollars in millions, amounts pretax)	Three Months Ended September 30 2016			Nine Months Ended September 30 2016		
	Gains (Losses) Recognized in Accumulated OCI on Derivative	Gains (Losses) Reclassified to Income from Accumulated OCI	Hedge Ineffectiveness and Amounts Excluded from Effectiveness Testing <sup>(1)</sup>	Gains (Losses) Recognized in Accumulated OCI on Derivative	Gains (Losses) Reclassified to Income from Accumulated OCI	Hedge Ineffectiveness and Amounts Excluded from Effectiveness Testing <sup>(1)</sup>
Cash flow hedges						
Interest rate risk on variable-rate portfolios	\$ (8 )	\$ (119 )	\$ (4 )	\$ 50	\$ (447 )	\$ 2
Price risk on restricted stock awards <sup>(2)</sup>	85	(8 )	—	(114 )	(61 )	—
Total	\$ 77	\$ (127 )	\$ (4 )	\$ (64 )	\$ (508 )	\$ 2
Net investment hedges						
Foreign exchange risk	\$ 214	\$ 2	\$ (68 )	\$ 173	\$ 3	\$ (234 )
2015						
Cash flow hedges						
Interest rate risk on variable-rate portfolios	\$ 94	\$ (254 )	\$ 4	\$ 99	\$ (768 )	\$ 3
Price risk on restricted stock awards <sup>(2)</sup>	(112 )	30	—	(141 )	57	—
Total	\$ (18 )	\$ (224 )	\$ 4	\$ (42 )	\$ (711 )	\$ 3
Net investment hedges						
Foreign exchange risk	\$ 1,407	\$ 14	\$ (98 )	\$ 2,397	\$ 98	\$ (185 )

<sup>(1)</sup> Amounts related to cash flow hedges represent hedge ineffectiveness and amounts related to net investment hedges represent amounts excluded from effectiveness testing.

<sup>(2)</sup> The hedge gain (loss) recognized in accumulated OCI is primarily related to the change in the Corporation's stock price for the period.



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## Other Risk Management Derivatives

Other risk management derivatives are used by the Corporation to reduce certain risk exposures. These derivatives are not qualifying accounting hedges because either they did not qualify for or were not designated as accounting hedges. The table below presents gains (losses) on these derivatives for the three and nine months ended September 30, 2016 and 2015. These gains (losses) are largely offset by the income or expense that is recorded on the hedged item.

## Other Risk Management Derivatives

Gains (Losses)	Three		Nine Months	
	Months		Months	
	Ended		Ended	
	September		September 30	
	2016	2015	2016	2015
Interest rate risk on mortgage banking income <sup>(1)</sup>	\$57	\$474	\$882	\$380
Credit risk on loans <sup>(2)</sup>	(7 )	24	(103 )	(34 )
Interest rate and foreign currency risk on ALM activities <sup>(3)</sup>	(262)	(527 )	(1,970)	(202 )
Price risk on restricted stock awards <sup>(4)</sup>	199	(229 )	(569 )	(473 )
Other	—	22	40	15

(1) Net gains (losses) on these derivatives are recorded in mortgage banking income as they are used to mitigate the interest rate risk related to MSRMs, interest rate lock commitments (IRLCs) and mortgage loans held-for-sale (LHFS), all of which are measured at fair value with changes in fair value recorded in mortgage banking income. The net gains on IRLCs related to the origination of mortgage loans that are held-for-sale, which are not included in the table but are considered derivative instruments, were \$185 million and \$514 million for the three and nine months ended September 30, 2016 compared to \$184 million and \$611 million for the same periods in 2015.

(2) Primarily related to derivatives that are economic hedges of credit risk on loans. Net gains (losses) on these derivatives are recorded in other income.

(3) Primarily related to hedges of debt securities carried at fair value and hedges of foreign currency-denominated debt. Gains (losses) on these derivatives and the related hedged items are recorded in other income.

(4) Gains (losses) on these derivatives are recorded in personnel expense.

## Transfers of Financial Assets with Risk Retained through Derivatives

The Corporation enters into certain transactions involving the transfer of financial assets that are accounted for as sales where substantially all of the economic exposure to the transferred financial assets is retained through derivatives (e.g., interest rate and/or credit), but the Corporation does not retain control over the assets transferred. Through September 30, 2016 and December 31, 2015, the Corporation transferred \$6.9 billion and \$7.9 billion of primarily non-U.S. government-guaranteed mortgage-backed securities (MBS) to a third-party trust and received gross cash proceeds of \$6.9 billion and \$7.9 billion at the transfer dates. At September 30, 2016 and December 31, 2015, the fair value of these securities was \$6.7 billion and \$7.2 billion. Derivative assets of \$28 million and \$24 million and liabilities of \$30 million and \$29 million were recorded at September 30, 2016 and December 31, 2015, and are included in credit derivatives in the derivative instruments table on page 103.

## Sales and Trading Revenue

The Corporation enters into trading derivatives to facilitate client transactions and to manage risk exposures arising from trading account assets and liabilities. It is the Corporation's policy to include these derivative instruments in its trading activities which include derivatives and non-derivative cash instruments. The resulting risk from these

derivatives is managed on a portfolio basis as part of the Corporation's Global Markets business segment. The related sales and trading revenue generated within Global Markets is recorded in various income statement line items including trading account profits and net interest income as well as other revenue categories.

Sales and trading revenue includes changes in the fair value and realized gains and losses on the sales of trading and other assets, net interest income, and fees primarily from commissions on equity securities. Revenue is generated by the difference in the client price for an instrument and the price at which the trading desk can execute the trade in the dealer market. For equity securities, commissions related to purchases and sales are recorded in the "Other" column in the Sales and Trading Revenue table. Changes in the fair value of these securities are included in trading account profits. For debt securities, revenue, with the exception of interest associated with the debt securities, is typically included in trading account profits. Unlike commissions for equity securities, the initial revenue related to broker-dealer services for debt securities is typically included in the pricing of the instrument rather than being charged through separate fee arrangements. Therefore, this revenue is recorded in trading account profits as part of the initial mark to fair value. For derivatives, the majority of revenue is included in trading account profits. In transactions where the Corporation acts as agent, which include exchange-traded futures and options, fees are recorded in other income.

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The table below, which includes both derivatives and non-derivative cash instruments, identifies the amounts in the respective income statement line items attributable to the Corporation's sales and trading revenue in Global Markets, categorized by primary risk, for the three and nine months ended September 30, 2016 and 2015. The difference between total trading account profits in the table below and in the Consolidated Statement of Income represents trading activities in business segments other than Global Markets. This table includes debit valuation and funding valuation adjustment (DVA/FVA) gains (losses). Global Markets results in Note 18 – Business Segment Information are presented on a fully taxable-equivalent (FTE) basis. The table below is not presented on an FTE basis.

## Sales and Trading Revenue

(Dollars in millions)	Three Months Ended September 30 2016				Nine Months Ended September 30 2016			
	Trading Account Profits	Net Interest Income	Other (1)	Total	Trading Account Profits	Net Interest Income	Other (1)	Total
Interest rate risk	\$514	\$ 304	\$82	\$900	\$1,438	\$1,063	\$207	\$2,708
Foreign exchange risk	319	(4 )	(39 )	276	1,003	(7 )	(111 )	885
Equity risk	461	30	467	958	1,478	11	1,574	3,063
Credit risk	597	639	123	1,359	1,218	1,910	380	3,508
Other risk	43	7	10	60	264	(19 )	35	280
Total sales and trading revenue	\$1,934	\$ 976	\$643	\$3,553	\$5,401	\$2,958	\$2,085	\$10,444
	2015				2015			
Interest rate risk	\$405	\$ 333	\$50	\$788	\$1,269	\$924	\$(327 )	\$1,866
Foreign exchange risk	310	(4 )	(36 )	270	1,052	(6 )	(99 )	947
Equity risk	558	38	547	1,143	1,795	15	1,638	3,448
Credit risk	84	614	99	797	825	1,776	406	3,007
Other risk	114	(24 )	24	114	371	(62 )	51	360
Total sales and trading revenue	\$1,471	\$ 957	\$684	\$3,112	\$5,312	\$2,647	\$1,669	\$9,628

Represents amounts in investment and brokerage services and other income that are recorded in Global Markets and included in the definition of sales and trading revenue. Includes investment and brokerage services revenue of \$485 million and \$1.6 billion for the three and nine months ended September 30, 2016 and \$568 million and \$1.7 billion for the same periods in 2015.

## Credit Derivatives

The Corporation enters into credit derivatives primarily to facilitate client transactions and to manage credit risk exposures. Credit derivatives derive value based on an underlying third-party referenced obligation or a portfolio of referenced obligations and generally require the Corporation, as the seller of credit protection, to make payments to a buyer upon the occurrence of a pre-defined credit event. Such credit events generally include bankruptcy of the referenced credit entity and failure to pay under the obligation, as well as acceleration of indebtedness and payment repudiation or moratorium. For credit derivatives based on a portfolio of referenced credits or credit indices, the Corporation may not be required to make payment until a specified amount of loss has occurred and/or may only be required to make payment up to a specified amount.

Credit derivative instruments where the Corporation is the seller of credit protection and their expiration are summarized in the table below. These instruments are classified as investment and non-investment grade based on the credit quality of the underlying referenced obligation. The Corporation considers ratings of BBB- or higher as investment grade. Non-investment grade includes non-rated credit derivative instruments. The Corporation discloses

internal categorizations of investment grade and non-investment grade consistent with how risk is managed for these instruments.

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## Credit Derivative Instruments

(Dollars in millions)	September 30, 2016				
	Carrying Value				
	Less than One Year	One to Three Years	Three to Five Years	Over Five Years	Total
Credit default swaps:					
Investment grade	\$22	\$59	\$526	\$918	\$1,525
Non-investment grade	461	1,241	1,175	3,797	6,674
Total	483	1,300	1,701	4,715	8,199
Total return swaps/other:					
Investment grade	13	—	—	—	13
Non-investment grade	305	27	2	3	337
Total	318	27	2	3	350
Total credit derivatives	\$801	\$1,327	\$1,703	\$4,718	\$8,549
Credit-related notes:					
Investment grade	\$1	\$57	\$589	\$1,486	\$2,133
Non-investment grade	55	58	85	1,204	1,402
Total credit-related notes	\$56	\$115	\$674	\$2,690	\$3,535
Maximum Payout/Notional					
Credit default swaps:					
Investment grade	\$156,227	\$210,797	\$142,483	\$33,151	\$542,658
Non-investment grade	86,898	97,759	53,549	22,347	260,553
Total	243,125	308,556	196,032	55,498	803,211
Total return swaps/other:					
Investment grade	12,623	—	—	—	12,623
Non-investment grade	24,299	5,485	591	230	30,605
Total	36,922	5,485	591	230	43,228
Total credit derivatives	\$280,047	\$314,041	\$196,623	\$55,728	\$846,439
December 31, 2015					
Carrying Value					
Credit default swaps:					
Investment grade	\$84	\$481	\$2,203	\$680	\$3,448
Non-investment grade	672	3,035	2,386	3,583	9,676
Total	756	3,516	4,589	4,263	13,124
Total return swaps/other:					
Investment grade	5	—	—	—	5
Non-investment grade	171	236	8	2	417
Total	176	236	8	2	422
Total credit derivatives	\$932	\$3,752	\$4,597	\$4,265	\$13,546
Credit-related notes:					
Investment grade	\$267	\$57	\$444	\$2,203	\$2,971
Non-investment grade	61	118	117	1,264	1,560
Total credit-related notes	\$328	\$175	\$561	\$3,467	\$4,531
Maximum Payout/Notional					
Credit default swaps:					
Investment grade	\$149,177	\$280,658	\$178,990	\$26,352	\$635,177
Non-investment grade	81,596	135,850	53,299	18,221	288,966

Total	230,773	416,508	232,289	44,573	924,143
Total return swaps/other:					
Investment grade	9,758	—	—	—	9,758
Non-investment grade	20,917	6,989	1,371	623	29,900
Total	30,675	6,989	1,371	623	39,658
Total credit derivatives	\$261,448	\$423,497	\$233,660	\$45,196	\$963,801

The notional amount represents the maximum amount payable by the Corporation for most credit derivatives. However, the Corporation does not monitor its exposure to credit derivatives based solely on the notional amount because this measure does not take into consideration the probability of occurrence. As such, the notional amount is not a reliable indicator of the Corporation's exposure to these contracts. Instead, a risk framework is used to define risk tolerances and establish limits to help ensure that certain credit risk-related losses occur within acceptable, predefined limits.

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The Corporation manages its market risk exposure to credit derivatives by entering into a variety of offsetting derivative contracts and security positions. For example, in certain instances, the Corporation may purchase credit protection with identical underlying referenced names to offset its exposure. The carrying value and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names and terms were \$4.9 billion and \$623.0 billion at September 30, 2016, and \$8.2 billion and \$706.0 billion at December 31, 2015.

Credit-related notes in the table on page 111 include investments in securities issued by collateralized debt obligation (CDO), collateralized loan obligation (CLO) and credit-linked note vehicles. These instruments are primarily classified as trading securities. The carrying value of these instruments equals the Corporation's maximum exposure to loss. The Corporation is not obligated to make any payments to the entities under the terms of the securities owned.

### Credit-related Contingent Features and Collateral

The Corporation executes the majority of its derivative contracts in the OTC market with large, international financial institutions, including broker-dealers and, to a lesser degree, with a variety of non-financial companies. A significant majority of the derivative transactions are executed on a daily margin basis. Therefore, events such as a credit rating downgrade (depending on the ultimate rating level) or a breach of credit covenants would typically require an increase in the amount of collateral required of the counterparty, where applicable, and/or allow the Corporation to take additional protective measures such as early termination of all trades. Further, as previously discussed on page 103, the Corporation enters into legally enforceable master netting agreements which reduce risk by permitting the closeout and netting of transactions with the same counterparty upon the occurrence of certain events.

A majority of the Corporation's derivative contracts contain credit risk-related contingent features, primarily in the form of ISDA master netting agreements and credit support documentation that enhance the creditworthiness of these instruments compared to other obligations of the respective counterparty with whom the Corporation has transacted. These contingent features may be for the benefit of the Corporation as well as its counterparties with respect to changes in the Corporation's creditworthiness and the mark-to-market exposure under the derivative transactions. At September 30, 2016 and December 31, 2015, the Corporation held cash and securities collateral of \$86.1 billion and \$78.9 billion, and posted cash and securities collateral of \$70.6 billion and \$62.7 billion in the normal course of business under derivative agreements. This excludes cross-product margining agreements where clients are permitted to margin on a net basis for both derivative and secured financing arrangements.

In connection with certain OTC derivative contracts and other trading agreements, the Corporation can be required to provide additional collateral or to terminate transactions with certain counterparties in the event of a downgrade of the senior debt ratings of the Corporation or certain subsidiaries. The amount of additional collateral required depends on the contract and is usually a fixed incremental amount and/or the market value of the exposure.

At September 30, 2016, the amount of collateral, calculated based on the terms of the contracts, that the Corporation and certain subsidiaries could be required to post to counterparties but had not yet posted to counterparties was approximately \$2.5 billion, including \$1.6 billion for Bank of America, N.A. (BANA).

Some counterparties are currently able to unilaterally terminate certain contracts, or the Corporation or certain subsidiaries may be required to take other action such as find a suitable replacement or obtain a guarantee. At September 30, 2016, the current liability recorded for these derivative contracts was \$44 million.

The table below presents the amount of additional collateral that would have been contractually required by derivative contracts and other trading agreements at September 30, 2016 if the rating agencies had downgraded their long-term senior debt ratings for the Corporation or certain subsidiaries by one incremental notch and by an additional second

incremental notch.

Additional Collateral Required to Be Posted Upon Downgrade

September 30,  
2016

(Dollars in millions)	One notch Second notch incremental notch
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Bank of America Corporation	\$792 \$ 2,506
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Bank of America, N.A. and subsidiaries <sup>(1)</sup>	611 2,045
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<sup>(1)</sup> Included in Bank of America Corporation collateral requirements in this table.



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The table below presents the derivative liabilities that would be subject to unilateral termination by counterparties and the amounts of collateral that would have been contractually required at September 30, 2016 if the long-term senior debt ratings for the Corporation or certain subsidiaries had been lower by one incremental notch and by an additional second incremental notch.

Derivative Liabilities Subject to  
Unilateral Termination Upon Downgrade

	September 30, 2016	
	One	Second
(Dollars in millions)	incremental	incremental
	notch	notch
Derivative liabilities	\$1,014	\$ 3,935
Collateral posted	703	3,649

Valuation Adjustments on Derivatives

The table below presents credit valuation adjustment (CVA), DVA and FVA gains (losses) on derivatives, which are recorded in trading account profits, on a gross and net of hedge basis for the three and nine months ended September 30, 2016 and 2015. For more information on the valuation adjustments on derivatives, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K

Valuation Adjustments on Derivatives

Gains (Losses)	Three Months Ended		Nine Months Ended	
	September 30		September 30	
	2016	2015	2016	2015
(Dollars in millions)	Gross	Net	Gross	Net
Derivative assets (CVA) <sup>(1)</sup>	\$280	\$66	\$(138)	\$67
Derivative assets/liabilities (FVA) <sup>(1)</sup>	42	51	(48)	(48)
Derivative liabilities (DVA) <sup>(1)</sup>	(125)	(103)	132	66
			106	(60)
			141	16

At September 30, 2016 and December 31, 2015, cumulative CVA reduced the derivative assets balance by \$1.3 billion and \$1.4 billion, cumulative FVA reduced the net derivative assets balance by \$472 million and \$481 million, and cumulative DVA reduced the derivative liabilities balance by \$856 million and \$750 million, respectively.



Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	84,508	330	(792	)	84,046
Total debt securities <sup>(2)</sup>	\$406,936	\$ 2,246	\$ (2,756	)	\$406,426
Available-for-sale marketable equity securities <sup>(3)</sup>	\$326	\$ 99	\$ —		\$425

(1) At September 30, 2016 and December 31, 2015, the underlying collateral type included approximately 57 percent and 71 percent prime, 25 percent and 15 percent Alt-A, and 18 percent and 14 percent subprime.

The Corporation had debt securities from Fannie Mae (FNMA) and Freddie Mac (FHLMC) that each exceeded 10 percent of shareholders' equity, with an amortized cost of \$154.7 billion and \$51.1 billion, and a fair value of

(2) \$158.0 billion and \$52.4 billion at September 30, 2016. Debt securities from FNMA and FHLMC that exceeded 10 percent of shareholders' equity had an amortized cost of \$145.8 billion and \$53.3 billion, and a fair value of \$145.5 billion and \$53.2 billion at December 31, 2015.

(3) Classified in other assets on the Consolidated Balance Sheet.

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At September 30, 2016, the accumulated net unrealized gain on AFS debt securities included in accumulated OCI was \$3.4 billion, net of the related income tax expense of \$2.1 billion. At September 30, 2016 and December 31, 2015, the Corporation had nonperforming AFS debt securities of \$125 million and \$188 million.

The table below presents the components of other debt securities carried at fair value where the changes in fair value are reported in other income. In the three and nine months ended September 30, 2016, the Corporation recorded unrealized mark-to-market net gains of \$47 million and net losses of \$25 million, and realized net losses of \$28 million and \$65 million, compared to unrealized mark-to-market net gains of \$212 million and \$57 million, and realized net losses of \$147 million and \$168 million, for the same periods in 2015. These amounts exclude hedge results.

## Other Debt Securities Carried at Fair Value

(Dollars in millions)	September 30 2016	December 31 2015
Mortgage-backed securities:		
Agency-collateralized mortgage obligations	\$ 6	\$ 7
Non-agency residential	3,193	3,490
Total mortgage-backed securities	3,199	3,497
Non-U.S. securities <sup>(1)</sup>	17,680	12,843
Other taxable securities, substantially all asset-backed securities	246	267
Total	\$ 21,125	\$ 16,607

<sup>(1)</sup> These securities are primarily used to satisfy certain international regulatory liquidity requirements.

The gross realized gains and losses on sales of AFS debt securities for the three and nine months ended September 30, 2016 and 2015 are presented in the table below.

## Gains and Losses on Sales of AFS Debt Securities

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
Gross gains	\$57	\$441	\$513	\$899
Gross losses	(6 )	(4 )	(23 )	(13 )
Net gains on sales of AFS debt securities	\$51	\$437	\$490	\$886
Income tax expense attributable to realized net gains on sales of AFS debt securities	\$19	\$166	\$186	\$337

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The table below presents the fair value and the associated gross unrealized losses on AFS debt securities and whether these securities have had gross unrealized losses for less than 12 months or for 12 months or longer at September 30, 2016 and December 31, 2015.

## Temporarily Impaired and Other-than-temporarily Impaired AFS Debt Securities

(Dollars in millions)	September 30, 2016					
	Less than Twelve Months		Twelve Months or Longer		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Temporarily impaired AFS debt securities						
Mortgage-backed securities:						
Agency	\$1,591	\$ (2)	\$4,105	\$ (21)	\$5,696	\$ (23)
Agency-collateralized mortgage obligations	604	(3)	1,133	(21)	1,737	(24)
Commercial	941	(2)	—	—	941	(2)
Non-agency residential	—	—	237	(16)	237	(16)
Total mortgage-backed securities	3,136	(7)	5,475	(58)	8,611	(65)
U.S. Treasury and agency securities	2,213	(4)	—	—	2,213	(4)
Non-U.S. securities	273	(1)	133	(3)	406	(4)
Other taxable securities, substantially all asset-backed securities	3,499	(8)	1,448	(24)	4,947	(32)
Total taxable securities	9,121	(20)	7,056	(85)	16,177	(105)
Tax-exempt securities	2,731	(11)	1,077	(19)	3,808	(30)
Total temporarily impaired AFS debt securities	11,852	(31)	8,133	(104)	19,985	(135)
Other-than-temporarily impaired AFS debt securities <sup>(1)</sup>						
Non-agency residential mortgage-backed securities	21	(1)	387	(21)	408	(22)
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	\$11,873	\$ (32)	\$8,520	\$ (125)	\$20,393	\$ (157)

## December 31, 2015

Temporarily impaired AFS debt securities						
Mortgage-backed securities:						
Agency	\$115,502	\$ (1,082)	\$13,083	\$ (388)	\$128,585	\$ (1,470)
Agency-collateralized mortgage obligations	2,536	(19)	1,212	(36)	3,748	(55)
Commercial	4,587	(65)	—	—	4,587	(65)
Non-agency residential	553	(5)	723	(33)	1,276	(38)
Total mortgage-backed securities	123,178	(1,171)	15,018	(457)	138,196	(1,628)
U.S. Treasury and agency securities	1,172	(5)	190	(4)	1,362	(9)
Non-U.S. securities	—	—	134	(3)	134	(3)
Other taxable securities, substantially all asset-backed securities	4,936	(67)	869	(17)	5,805	(84)
Total taxable securities	129,286	(1,243)	16,211	(481)	145,497	(1,724)
Tax-exempt securities	4,400	(12)	1,877	(21)	6,277	(33)
Total temporarily impaired AFS debt securities	133,686	(1,255)	18,088	(502)	151,774	(1,757)
Other-than-temporarily impaired AFS debt securities <sup>(1)</sup>						
Non-agency residential mortgage-backed securities	481	(19)	98	(14)	579	(33)

Total temporarily impaired and other-than-temporarily impaired AFS debt securities \$134,167 \$(1,274 ) \$18,186 \$ (516 ) \$152,353 \$(1,790 )

<sup>(1)</sup> Includes other-than-temporarily impaired AFS debt securities on which an other-than-temporary impairment (OTTI) loss, primarily related to changes in interest rates, remains in accumulated OCI.

The Corporation recorded OTTI losses on AFS debt securities for the three and nine months ended September 30, 2016 and 2015 as presented in the Net Credit-related Impairment Losses Recognized in Earnings table. Substantially all OTTI losses in the three and nine months ended September 30, 2016 and 2015 consisted of credit losses on non-agency residential mortgage-backed securities (RMBS) and were recorded in other income in the Consolidated Statement of Income. A debt security is impaired when its fair value is less than its amortized cost. If the Corporation intends or will more-likely-than-not be required to sell a debt security prior to recovery, the entire impairment loss is recorded in the Consolidated Statement of Income. For AFS debt securities the Corporation does not intend or will

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not more-likely-than-not be required to sell, an analysis is performed to determine if any of the impairment is due to credit or whether it is due to other factors (e.g., interest rate). Credit losses are considered unrecoverable and, accordingly, are recorded in the Consolidated Statement of Income with the remaining unrealized losses recorded in OCI. In certain instances, the credit loss on a debt security may exceed the total impairment, in which case, the excess of the credit loss over the total impairment is recorded as an unrealized gain in OCI.

## Net Credit-related Impairment Losses Recognized in Earnings

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Total OTTI losses	\$ (6)	\$ (5)	\$ (27)	\$ (87)
Less: non-credit portion of total OTTI losses recognized in OCI	4	3	13	10
Net credit-related impairment losses recognized in earnings	\$ (2)	\$ (2)	\$ (14)	\$ (77)

The table below presents a rollforward of the credit losses recognized in earnings for the three and nine months ended September 30, 2016 and 2015 on AFS debt securities that the Corporation does not have the intent to sell or will not more-likely-than-not be required to sell.

## Rollforward of OTTI Credit Losses Recognized

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2016	2015	2016	2015
Balance, beginning of period	\$246	\$261	\$266	\$200
Additions for credit losses recognized on AFS debt securities that had no previous impairment losses	—	1	2	50
Additions for credit losses recognized on AFS debt securities that had previously incurred impairment losses	2	—	12	26
Reductions for AFS debt securities matured, sold or intended to be sold	—	—	(32)	(14)
Balance, September 30	\$248	\$262	\$248	\$262

The Corporation estimates the portion of a loss on a security that is attributable to credit using a discounted cash flow model and estimates the expected cash flows of the underlying collateral using internal credit, interest rate and prepayment risk models that incorporate management's best estimate of current key assumptions such as default rates, loss severity and prepayment rates. Assumptions used for the underlying loans that support the MBS can vary widely from loan to loan and are influenced by such factors as loan interest rate, geographic location of the borrower, borrower characteristics and collateral type. Based on these assumptions, the Corporation then determines how the underlying collateral cash flows will be distributed to each MBS issued from the applicable special purpose entity. Expected principal and interest cash flows on an impaired AFS debt security are discounted using the effective yield of each individual impaired AFS debt security.

Significant assumptions used in estimating the expected cash flows for measuring credit losses on non-agency RMBS were as follows at September 30, 2016.

Significant Assumptions

	Weighted- average	Range <sup>(1)</sup>	
		10th Percentile (2)	90th Percentile (2)
Annual prepayment speed	14.2 %	4.9%	28.0 %
Loss severity	20.1	8.7	36.8
Life default rate	20.6	0.7	78.2

<sup>(1)</sup> Represents the range of inputs/assumptions based upon the underlying collateral.

<sup>(2)</sup> The value of a variable below which the indicated percentile of observations will fall.



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Annual constant prepayment speed and loss severity rates are projected considering collateral characteristics such as loan-to-value (LTV), creditworthiness of borrowers as measured using Fair Isaac Corporation (FICO) scores, and geographic concentrations. The weighted-average severity by collateral type was 17.3 percent for prime, 18.8 percent for Alt-A and 30.6 percent for subprime at September 30, 2016. Additionally, default rates are projected by considering collateral characteristics including, but not limited to, LTV, FICO score and geographic concentration. Weighted-average life default rates by collateral type were 14.2 percent for prime, 21.8 percent for Alt-A and 21.5 percent for subprime at September 30, 2016.

The remaining contractual maturity distribution and yields of the Corporation's debt securities carried at fair value and HTM debt securities at September 30, 2016 are summarized in the table below. Actual duration and yields may differ as prepayments on the loans underlying the mortgage or other asset-backed securities are passed through to the Corporation.

Maturities of Debt Securities Carried at Fair Value and Held-to-maturity Debt Securities  
September 30, 2016

(Dollars in millions)	Due in One Year or Less		Due after One Year through Five Years		Due after Five Years through Ten Years		Due after Ten Years		Total	
	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>
Amortized cost of debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$2	5.24%	\$79	2.99%	\$405	2.58%	\$196,322	3.26%	\$196,808	3.25%
Agency-collateralized mortgage obligations	—	—	—	—	—	—	8,867	3.19	8,867	3.19
Commercial	48	8.56	499	1.89	10,891	2.46	1,117	2.22	12,555	2.44
Non-agency residential	—	—	—	—	—	—	4,767	8.15	4,767	8.15
Total mortgage-backed securities	50	8.43	578	2.04	11,296	2.46	211,073	3.36	222,997	3.31
U.S. Treasury and agency securities	534	0.31	30,312	1.30	13,862	1.51	217	5.46	44,925	1.37
Non-U.S. securities	22,106	0.64	1,035	1.89	262	1.43	264	6.56	23,667	0.77
Other taxable securities, substantially all asset-backed securities	1,818	1.40	4,021	1.65	2,447	2.77	1,343	3.30	9,629	2.12
Total taxable securities	24,508	0.71	35,946	1.37	27,867	2.01	212,897	3.37	301,218	2.78
Tax-exempt securities	1,569	0.99	6,025	1.25	6,402	1.43	1,921	1.35	15,917	1.31
Total amortized cost of debt securities carried at fair value	\$26,077	0.73	\$41,971	1.35	\$34,269	1.90	\$214,818	3.35	\$317,135	2.71
Amortized cost of HTM debt securities <sup>(2)</sup>	\$—	—	\$16	3.54	\$904	2.40	\$111,489	3.06	\$112,409	3.06
Debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$2		\$54		\$414		\$200,581		\$201,051	
Agency-collateralized mortgage obligations	—		—		—		9,087		9,087	
Commercial	48		506		11,257		1,125		12,936	

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Non-agency residential	—	—	—	4,811	4,811
Total mortgage-backed securities	50	560	11,671	215,604	227,885
U.S. Treasury and agency securities	535	30,565	13,947	237	45,284
Non-U.S. securities	22,113	1,040	264	273	23,690
Other taxable securities, substantially all asset-backed securities	1,816	3,982	2,496	1,368	9,662
Total taxable securities	24,514	36,147	28,378	217,482	306,521
Tax-exempt securities	1,570	6,033	6,473	1,908	15,984
Total debt securities carried at fair value	\$26,084	\$42,180	\$34,851	\$219,390	\$322,505
Fair value of HTM debt securities <sup>(2)</sup>	\$—	\$16	\$921	\$113,028	\$113,965

The average yield is computed based on a constant effective interest rate over the contractual life of each security.

(1) The average yield considers the contractual coupon and the amortization of premiums and accretion of discounts, excluding the effect of related hedging derivatives.

(2) Substantially all U.S. agency MBS.

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## NOTE 4 – Outstanding Loans and Leases

The following tables present total outstanding loans and leases and an aging analysis for the Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments, by class of financing receivables, at September 30, 2016 and December 31, 2015.

(Dollars in millions)	September 30, 2016					Total Current or Less Than 30 Days Past Due <sup>(3)</sup>	Purchased Credit - impaired <sup>(4)</sup>	Loans Accounted for Under the Fair Value Option	Total Outstandings
	30-59 Days Past Due <sup>(1)</sup>	60-89 Days Past Due <sup>(1)</sup>	90 Days or More Past Due <sup>(2)</sup>	Total Past Due 30 Days or More					
Consumer real estate									
Core portfolio									
Residential mortgage	\$1,100	\$337	\$1,244	\$2,681	\$147,810				\$150,491
Home equity	222	107	464	793	50,131				50,924
Non-core portfolio									
Residential mortgage <sup>(5)</sup>	1,402	717	5,803	7,922	18,941	\$10,614			37,477
Home equity	291	137	865	1,293	12,926	3,854			18,073
Credit card and other consumer									
U.S. credit card	443	314	702	1,459	87,330				88,789
Non-U.S. credit card	32	28	65	125	9,133				9,258
Direct/Indirect consumer <sup>(6)</sup>	223	62	29	314	92,980				93,294
Other consumer <sup>(7)</sup>	25	6	4	35	2,354				2,389
Total consumer	3,738	1,708	9,176	14,622	421,605	14,468			450,695
Consumer loans accounted for under the fair value option <sup>(8)</sup>							\$1,768		1,768
Total consumer loans and leases	3,738	1,708	9,176	14,622	421,605	14,468	1,768		452,463
Commercial									
U.S. commercial	260	142	310	712	266,307				267,019
Commercial real estate <sup>(9)</sup>	19	19	38	76	57,227				57,303
Commercial lease financing	63	39	32	134	21,175				21,309
Non-U.S. commercial	1	18	3	22	87,475				87,497
U.S. small business commercial	51	41	79	171	12,906				13,077
Total commercial	394	259	462	1,115	445,090				446,205
Commercial loans accounted for under the fair value option <sup>(8)</sup>							6,340		6,340
Total commercial loans and leases	394	259	462	1,115	445,090		6,340		452,545
Total loans and leases <sup>(10)</sup>	\$4,132	\$1,967	\$9,638	\$15,737	\$866,695	\$14,468	\$8,108		\$905,008
Percentage of outstandings	0.46	%0.22	%1.06	%1.74	%95.76	%1.60	%0.90	%100.00	%

Consumer real estate loans 30-59 days past due includes fully-insured loans of \$1.1 billion and nonperforming <sup>(1)</sup> loans of \$306 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$603 million and nonperforming loans of \$233 million.

- (2) Consumer real estate includes fully-insured loans of \$5.1 billion.
- (3) Consumer real estate includes \$2.5 billion and direct/indirect consumer includes \$25 million of nonperforming loans.
- (4) Purchased credit-impaired (PCI) loan amounts are shown gross of the valuation allowance.
- (5) Total outstandings includes pay option loans of \$1.9 billion. The Corporation no longer originates this product. Total outstandings includes auto and specialty lending loans of \$47.8 billion, unsecured consumer lending loans of
- (6) \$630 million, U.S. securities-based lending loans of \$40.1 billion, non-U.S. consumer loans of \$3.1 billion, student loans of \$514 million and other consumer loans of \$1.1 billion.
- (7) Total outstandings includes consumer finance loans of \$489 million, consumer leases of \$1.7 billion and consumer overdrafts of \$151 million. Consumer loans accounted for under the fair value option were residential mortgage loans of \$1.4 billion and home equity loans of \$340 million. Commercial loans accounted for under the fair value option were U.S. commercial
- (8) loans of \$2.6 billion and non-U.S. commercial loans of \$3.7 billion. For additional information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.
- (9) Total outstandings includes U.S. commercial real estate loans of \$53.9 billion and non-U.S. commercial real estate loans of \$3.4 billion. The Corporation pledged \$146.1 billion of loans to secure potential borrowing capacity with the Federal Reserve
- (10) Bank and Federal Home Loan Banks. This amount is not included in the parenthetical disclosure of loans and leases pledged as collateral on the Consolidated Balance Sheet as there were no related outstanding borrowings.

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(Dollars in millions)	December 31, 2015						Loans	
	30-59 Days Past Due (1)	60-89 Days Past Due (1)	90 Days or More Past Due (2)	Total Past Due 30 Days or More	Total Current or Less Than 30 Days Past Due (3)	Purchased Credit - impaired (4)	Accounted for Under the Fair Value Option	Total Outstandings
Consumer real estate								
Core portfolio								
Residential mortgage	\$1,214	\$368	\$1,414	\$2,996	\$138,799			\$141,795
Home equity	200	93	579	872	54,045			54,917
Non-core portfolio								
Residential mortgage (5)	2,045	1,167	8,439	11,651	22,399	\$12,066		46,116
Home equity	335	174	1,170	1,679	14,733	4,619		21,031
Credit card and other consumer								
U.S. credit card	454	332	789	1,575	88,027			89,602
Non-U.S. credit card	39	31	76	146	9,829			9,975
Direct/Indirect consumer (6)	227	62	42	331	88,464			88,795
Other consumer (7)	18	3	4	25	2,042			2,067
Total consumer	4,532	2,230	12,513	19,275	418,338	16,685		454,298
Consumer loans accounted for under the fair value option (8)							\$1,871	1,871
Total consumer loans and leases	4,532	2,230	12,513	19,275	418,338	16,685	1,871	456,169
Commercial								
U.S. commercial	444	148	332	924	251,847			252,771
Commercial real estate (9)	36	11	82	129	57,070			57,199
Commercial lease financing	150	29	20	199	21,153			21,352
Non-U.S. commercial	6	1	1	8	91,541			91,549
U.S. small business commercial	83	41	72	196	12,680			12,876
Total commercial	719	230	507	1,456	434,291			435,747
Commercial loans accounted for under the fair value option (8)							5,067	5,067
Total commercial loans and leases	719	230	507	1,456	434,291		5,067	440,814
Total loans and leases (10)	\$5,251	\$2,460	\$13,020	\$20,731	\$852,629	\$16,685	\$6,938	\$896,983
Percentage of outstandings	0.59	%0.27	%1.45	%2.31	%95.06	%1.86	%0.77	%100.00

Consumer real estate loans 30-59 days past due includes fully-insured loans of \$1.7 billion and nonperforming (1) loans of \$379 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$1.0 billion and nonperforming loans of \$297 million.

(2) Consumer real estate includes fully-insured loans of \$7.2 billion.

(3) Consumer real estate includes \$3.0 billion and direct/indirect consumer includes \$21 million of nonperforming loans.

(4) PCI loan amounts are shown gross of the valuation allowance.

(5) Total outstandings includes pay option loans of \$2.3 billion. The Corporation no longer originates this product.

(6)

Total outstandings includes auto and specialty lending loans of \$42.6 billion, unsecured consumer lending loans of \$886 million, U.S. securities-based lending loans of \$39.8 billion, non-U.S. consumer loans of \$3.9 billion, student loans of \$564 million and other consumer loans of \$1.0 billion.

(7) Total outstandings includes consumer finance loans of \$564 million, consumer leases of \$1.4 billion and consumer overdrafts of \$146 million.

(8) Consumer loans accounted for under the fair value option were residential mortgage loans of \$1.6 billion and home equity loans of \$250 million. Commercial loans accounted for under the fair value option were U.S. commercial loans of \$2.3 billion and non-U.S. commercial loans of \$2.8 billion. For additional information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.

(9) Total outstandings includes U.S. commercial real estate loans of \$53.6 billion and non-U.S. commercial real estate loans of \$3.5 billion.

(10) The Corporation pledged \$149.4 billion of loans to secure potential borrowing capacity with the Federal Reserve Bank and Federal Home Loan Banks. This amount is not included in the parenthetical disclosure of loans and leases pledged as collateral on the Consolidated Balance Sheet as there were no related outstanding borrowings.

The Corporation categorizes consumer real estate loans as core and non-core on the basis of loan and customer characteristics such as origination date, product type, LTV, FICO score and delinquency status consistent with its current consumer and mortgage servicing strategy. Generally, loans that were originated after January 1, 2010, qualified under government-sponsored enterprise underwriting guidelines, or otherwise met the Corporation's underwriting guidelines in place in 2015 are characterized as core loans. Loans held in legacy private-label securitizations, government-insured loans originated prior to 2010, loan products no longer originated, and loans originated prior to 2010 and classified as nonperforming or modified in a troubled debt restructuring (TDR) prior to 2016 are generally characterized as non-core loans, and are principally run-off portfolios. Core loans as reported within this Note include loans held in the Consumer Banking and Global Wealth & Investment Management (GWIM) segments, as well as loans held for ALM activities in All Other.

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The Corporation has entered into long-term credit protection agreements with FNMA and FHLMC on loans totaling \$6.0 billion and \$3.7 billion at September 30, 2016 and December 31, 2015, providing full credit protection on residential mortgage loans that become severely delinquent. All of these loans are individually insured and therefore the Corporation does not record an allowance for credit losses related to these loans.

Nonperforming Loans and Leases

The Corporation classifies junior-lien home equity loans as nonperforming when the first-lien loan becomes 90 days past due even if the junior-lien loan is performing. At September 30, 2016 and December 31, 2015, \$432 million and \$484 million of such junior-lien home equity loans were included in nonperforming loans.

The Corporation classifies consumer real estate loans that have been discharged in Chapter 7 bankruptcy and not reaffirmed by the borrower as TDRs, irrespective of payment history or delinquency status, even if the repayment terms for the loan have not been otherwise modified. The Corporation continues to have a lien on the underlying collateral. At September 30, 2016, nonperforming loans discharged in Chapter 7 bankruptcy with no change in repayment terms were \$616 million of which \$370 million were current on their contractual payments, while \$212 million were 90 days or more past due. Of the contractually current nonperforming loans, approximately 81 percent were discharged in Chapter 7 bankruptcy more than 12 months ago, and approximately 68 percent were discharged 24 months or more ago. As subsequent cash payments are received on these nonperforming loans that are contractually current, the interest component of the payments is generally recorded as interest income on a cash basis and the principal component is recorded as a reduction in the carrying value of the loan.

During the three and nine months ended September 30, 2016, the Corporation sold nonperforming and other delinquent consumer real estate loans with a carrying value of \$360 million and \$1.8 billion, including \$111 million and \$435 million of PCI loans, compared to \$742 million and \$2.7 billion, including \$220 million and \$1.2 billion of PCI loans, for the same periods in 2015. The Corporation recorded net recoveries of \$6 million and net charge-offs of \$39 million related to these sales for the three and nine months ended September 30, 2016 compared to net recoveries of \$58 million and \$125 million for the same periods in 2015. Gains related to these sales of \$19 million and \$63 million were recorded in other income in the Consolidated Statement of Income for the three and nine months ended September 30, 2016 compared to gains of \$67 million and \$142 million for the same periods in 2015.

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The table below presents the Corporation's nonperforming loans and leases including nonperforming TDRs, and loans accruing past due 90 days or more at September 30, 2016 and December 31, 2015. Nonperforming LHFS are excluded from nonperforming loans and leases as they are recorded at either fair value or the lower of cost or fair value. For more information on the criteria for classification as nonperforming, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## Credit Quality

(Dollars in millions)	Nonperforming Loans and Leases		Accruing Past Due 90 Days or More	
	September 30 / December 31		September 30 / December 31	
	2016	2015	2016	2015
Consumer real estate				
Core portfolio				
Residential mortgage <sup>(1)</sup>	\$1,394	\$ 1,825	\$452	\$ 382
Home equity	956	974	—	—
Non-core portfolio				
Residential mortgage <sup>(1)</sup>	1,947	2,978	4,665	6,768
Home equity	2,026	2,363	—	—
Credit card and other consumer				
U.S. credit card	n/a	n/a	702	789
Non-U.S. credit card	n/a	n/a	65	76
Direct/Indirect consumer	26	24	29	39
Other consumer	1	1	3	3
Total consumer	6,350	8,165	5,916	8,057
Commercial				
U.S. commercial	1,439	867	40	113
Commercial real estate	60	93	—	3
Commercial lease financing	35	12	28	15
Non-U.S. commercial	400	158	3	1
U.S. small business commercial	65	82	63	61
Total commercial	1,999	1,212	134	193
Total loans and leases	\$8,349	\$ 9,377	\$6,050	\$ 8,250

Residential mortgage loans in the core and non-core portfolios accruing past due 90 days or more are fully-insured loans. At September 30, 2016 and December 31, 2015, residential mortgage includes \$3.3 billion and \$4.3 billion <sup>(1)</sup> of loans on which interest has been curtailed by the Federal Housing Administration (FHA), and therefore are no longer accruing interest, although principal is still insured, and \$1.8 billion and \$2.9 billion of loans on which interest is still accruing.

n/a = not applicable

## Credit Quality Indicators

The Corporation monitors credit quality within its Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments based on primary credit quality indicators. For more information on the portfolio segments, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K. Within the Consumer Real Estate portfolio segment, the primary credit quality indicators are refreshed LTV and refreshed FICO score. Refreshed LTV measures the carrying value of the loan as a percentage of the value of the property securing the loan, refreshed quarterly. Home equity loans are evaluated using combined loan-to-value (CLTV) which measures the carrying value of the Corporation's loan and available line of credit combined with any outstanding senior liens against the property as a percentage of the value of



the property securing the loan, refreshed quarterly. FICO score measures the creditworthiness of the borrower based on the financial obligations of the borrower and the borrower's credit history. FICO scores are typically refreshed quarterly or more frequently. Certain borrowers (e.g., borrowers that have had debts discharged in a bankruptcy proceeding) may not have their FICO scores updated. FICO scores are also a primary credit quality indicator for the Credit Card and Other Consumer portfolio segment and the business card portfolio within U.S. small business commercial. Within the Commercial portfolio segment, loans are evaluated using the internal classifications of pass rated or reservable criticized as the primary credit quality indicators. The term reservable criticized refers to those commercial loans that are internally classified or listed by the Corporation as Special Mention, Substandard or Doubtful, which are asset quality categories defined by regulatory authorities. These assets have an elevated level of risk and may have a high probability of default or total loss. Pass rated refers to all loans not considered reservable criticized. In addition to these primary credit quality indicators, the Corporation uses other credit quality indicators for certain types of loans.

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The following tables present certain credit quality indicators for the Corporation's Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments, by class of financing receivables, at September 30, 2016 and December 31, 2015.

Consumer Real Estate – Credit Quality Indicators<sup>(1)</sup>

(Dollars in millions)	September 30, 2016					
	Core Portfolio Residential Mortgage (2)	Non-core Residential Mortgage (2)	Residential Mortgage PCI (3)	Core Portfolio Home Equity (2)(2)	Non-core Home Equity (2)(2)	Home Equity PCI
Refreshed LTV (4)						
Less than or equal to 90 percent	\$ 122,783	\$ 14,696	\$ 7,972	\$ 48,256	\$ 8,363	\$ 1,860
Greater than 90 percent but less than or equal to 100 percent	3,808	1,638	1,106	1,283	1,864	686
Greater than 100 percent	2,034	2,335	1,536	1,385	3,992	1,308
Fully-insured loans (5)	21,866	8,194	—	—	—	—
Total consumer real estate	\$ 150,491	\$ 26,863	\$ 10,614	\$ 50,924	\$ 14,219	\$ 3,854
Refreshed FICO score						
Less than 620	\$ 2,679	\$ 3,442	\$ 2,948	\$ 1,279	\$ 2,875	\$ 587
Greater than or equal to 620 and less than 680	5,250	2,956	2,337	2,933	3,280	683
Greater than or equal to 680 and less than 740	22,095	4,789	3,015	10,537	3,265	1,133
Greater than or equal to 740	98,601	7,482	2,314	36,175	4,799	1,451
Fully-insured loans (5)	21,866	8,194	—	—	—	—
Total consumer real estate	\$ 150,491	\$ 26,863	\$ 10,614	\$ 50,924	\$ 14,219	\$ 3,854

(1) Excludes \$1.8 billion of loans accounted for under the fair value option.

(2) Excludes PCI loans.

(3) Includes \$1.7 billion of pay option loans. The Corporation no longer originates this product.

(4) Refreshed LTV percentages for PCI loans are calculated using the carrying value net of the related valuation allowance.

(5) Credit quality indicators are not reported for fully-insured loans as principal repayment is insured.

## Credit Card and Other Consumer – Credit Quality Indicators

(Dollars in millions)	September 30, 2016			
	U.S. Credit Card	Non-U.S. Credit Card	Direct/Indirect Consumer	Other Consumer (1)
Refreshed FICO score				
Less than 620	\$ 4,136	\$ —	\$ 1,297	\$ 193
Greater than or equal to 620 and less than 680	11,887	—	1,887	219
Greater than or equal to 680 and less than 740	34,065	—	12,132	395
Greater than or equal to 740	38,701	—	33,139	1,428
Other internal credit metrics (2, 3, 4)	—	9,258	44,839	154
Total credit card and other consumer	\$ 88,789	\$ 9,258	\$ 93,294	\$ 2,389

(1) At September 30, 2016, 20 percent of the other consumer portfolio is associated with portfolios from certain consumer finance businesses that the Corporation previously exited.

(2) Other internal credit metrics may include delinquency status, geography or other factors.

(3) Direct/indirect consumer includes \$43.3 billion of securities-based lending which is overcollateralized and therefore has minimal credit risk and \$516 million of loans the Corporation no longer originates, primarily student

loans.

- (4) Non-U.S. credit card represents the U.K. credit card portfolio which is evaluated using internal credit metrics, including delinquency status. At September 30, 2016, 98 percent of this portfolio was current or less than 30 days past due, one percent was 30-89 days past due and one percent was 90 days or more past due.

Commercial – Credit Quality Indicators (1)

(Dollars in millions)	September 30, 2016				
	U.S. Commercial	Commercial Real Estate	Commercial Lease Financing	Non-U.S. Commercial	U.S. Small Business Commercial (2)
Risk ratings					
Pass rated	\$257,169	\$ 57,003	\$ 20,531	\$ 83,765	\$ 464
Reservable criticized	9,850	300	778	3,732	74
Refreshed FICO score (3)					
Less than 620					195
Greater than or equal to 620 and less than 680					578
Greater than or equal to 680 and less than 740					1,743
Greater than or equal to 740					3,349
Other internal credit metrics (3, 4)					6,674
Total commercial	\$267,019	\$ 57,303	\$ 21,309	\$ 87,497	\$ 13,077

(1) Excludes \$6.3 billion of loans accounted for under the fair value option.

(2) U.S. small business commercial includes \$731 million of criticized business card and small business loans which are evaluated using refreshed FICO scores or internal credit metrics, including delinquency status, rather than risk ratings. At September 30, 2016, 99 percent of the balances where internal credit metrics are used was current or less than 30 days past due.

(3) Refreshed FICO score and other internal credit metrics are applicable only to the U.S. small business commercial portfolio.

(4) Other internal credit metrics may include delinquency status, application scores, geography or other factors.

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(Dollars in millions)	December 31, 2015					
	Core Portfolio Residential Mortgage (2)	Non-core Residential Mortgage (2)	Residential Mortgage PCI (3)	Core Portfolio Home Equity (2)(2)	Non-core Home Equity (2)(2)	Home Equity PCI
Refreshed LTV (4)						
Less than or equal to 90 percent	\$ 110,023	\$ 16,481	\$ 8,655	\$ 51,262	\$ 8,347	\$ 2,003
Greater than 90 percent but less than or equal to 100 percent	4,038	2,224	1,403	1,858	2,190	852
Greater than 100 percent	2,638	3,364	2,008	1,797	5,875	1,764
Fully-insured loans (5)	25,096	11,981	—	—	—	—
Total consumer real estate	\$ 141,795	\$ 34,050	\$ 12,066	\$ 54,917	\$ 16,412	\$ 4,619
Refreshed FICO score						
Less than 620	\$ 3,129	\$ 4,749	\$ 3,798	\$ 1,322	\$ 3,490	\$ 729
Greater than or equal to 620 and less than 680	5,472	3,762	2,586	3,295	3,862	825
Greater than or equal to 680 and less than 740	22,486	5,138	3,187	12,180	3,451	1,356
Greater than or equal to 740	85,612	8,420	2,495	38,120	5,609	1,709
Fully-insured loans (5)	25,096	11,981	—	—	—	—
Total consumer real estate	\$ 141,795	\$ 34,050	\$ 12,066	\$ 54,917	\$ 16,412	\$ 4,619

(1) Excludes \$1.9 billion of loans accounted for under the fair value option.

(2) Excludes PCI loans.

(3) Includes \$2.0 billion of pay option loans. The Corporation no longer originates this product.

(4) Refreshed LTV percentages for PCI loans are calculated using the carrying value net of the related valuation allowance.

(5) Credit quality indicators are not reported for fully-insured loans as principal repayment is insured.

## Credit Card and Other Consumer – Credit Quality Indicators

(Dollars in millions)	December 31, 2015			
	U.S. Credit Card	Non-U.S. Credit Card	Direct/Indirect Consumer	Other Consumer (1)
Refreshed FICO score				
Less than 620	\$ 4,196	\$ —	\$ 1,244	\$ 217
Greater than or equal to 620 and less than 680	11,857	—	1,698	214
Greater than or equal to 680 and less than 740	34,270	—	10,955	337
Greater than or equal to 740	39,279	—	29,581	1,149
Other internal credit metrics (2, 3, 4)	—	9,975	45,317	150
Total credit card and other consumer	\$ 89,602	\$ 9,975	\$ 88,795	\$ 2,067

(1) At December 31, 2015, 27 percent of the other consumer portfolio is associated with portfolios from certain consumer finance businesses that the Corporation previously exited.

(2) Other internal credit metrics may include delinquency status, geography or other factors.

Direct/indirect consumer includes \$43.7 billion of securities-based lending which is overcollateralized and

(3) therefore has minimal credit risk and \$567 million of loans the Corporation no longer originates, primarily student loans.

Non-U.S. credit card represents the U.K. credit card portfolio which is evaluated using internal credit metrics,

(4) including delinquency status. At December 31, 2015, 98 percent of this portfolio was current or less than 30 days past due, one percent was 30-89 days past due and one percent was 90 days or more past due.

Commercial – Credit Quality Indicators<sup>(1)</sup>

(Dollars in millions)	December 31, 2015				U.S. Small
	U.S. Commercial	Commercial Real Estate	Commercial Lease Financing	Non-U.S. Commercial	Business Commercial <sup>(2)</sup>
Risk ratings					
Pass rated	\$243,922	\$ 56,688	\$ 20,644	\$ 87,905	\$ 571
Reservable criticized	8,849	511	708	3,644	96
Refreshed FICO score <sup>(3)</sup>					
Less than 620					184
Greater than or equal to 620 and less than 680					543
Greater than or equal to 680 and less than 740					1,627
Greater than or equal to 740					3,027
Other internal credit metrics <sup>(3,4)</sup>					6,828
Total commercial	\$252,771	\$ 57,199	\$ 21,352	\$ 91,549	\$ 12,876

<sup>(1)</sup> Excludes \$5.1 billion of loans accounted for under the fair value option.

<sup>(2)</sup> U.S. small business commercial includes \$670 million of criticized business card and small business loans which are evaluated using refreshed FICO scores or internal credit metrics, including delinquency status, rather than risk ratings. At December 31, 2015, 98 percent of the balances where internal credit metrics are used was current or less than 30 days past due.

<sup>(3)</sup> Refreshed FICO score and other internal credit metrics are applicable only to the U.S. small business commercial portfolio.

<sup>(4)</sup> Other internal credit metrics may include delinquency status, application scores, geography or other factors.

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### Impaired Loans and Troubled Debt Restructurings

A loan is considered impaired when, based on current information, it is probable that the Corporation will be unable to collect all amounts due from the borrower in accordance with the contractual terms of the loan. Impaired loans include nonperforming commercial loans and all consumer and commercial TDRs. Impaired loans exclude nonperforming consumer loans and nonperforming commercial leases unless they are classified as TDRs. Loans accounted for under the fair value option are also excluded. PCI loans are excluded and reported separately on page 137. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

### Consumer Real Estate

Impaired consumer real estate loans within the Consumer Real Estate portfolio segment consist entirely of TDRs. Excluding PCI loans, most modifications of consumer real estate loans meet the definition of TDRs when a binding offer is extended to a borrower. Modifications of consumer real estate loans are done in accordance with the government's Making Home Affordable Program (modifications under government programs) or the Corporation's proprietary programs (modifications under proprietary programs). These modifications are considered to be TDRs if concessions have been granted to borrowers experiencing financial difficulties. Concessions may include reductions in interest rates, capitalization of past due amounts, principal and/or interest forbearance, payment extensions, principal and/or interest forgiveness, or combinations thereof.

Prior to permanently modifying a loan, the Corporation may enter into trial modifications with certain borrowers under both government and proprietary programs. Trial modifications generally represent a three- to four-month period during which the borrower makes monthly payments under the anticipated modified payment terms. Upon successful completion of the trial period, the Corporation and the borrower enter into a permanent modification. Binding trial modifications are classified as TDRs when the trial offer is made and continue to be classified as TDRs regardless of whether the borrower enters into a permanent modification.

Consumer real estate loans that have been discharged in Chapter 7 bankruptcy with no change in repayment terms and not reaffirmed by the borrower of \$1.5 billion were included in TDRs at September 30, 2016, of which \$616 million were classified as nonperforming and \$603 million were loans fully-insured by the FHA. For more information on loans discharged in Chapter 7 bankruptcy, see Nonperforming Loans and Leases in this Note.

A consumer real estate loan, excluding PCI loans which are reported separately, is not classified as impaired unless it is a TDR. Once such a loan has been designated as a TDR, it is then individually assessed for impairment. Consumer real estate TDRs are measured primarily based on the net present value of the estimated cash flows discounted at the loan's original effective interest rate, as discussed in the following paragraph. If the carrying value of a TDR exceeds this amount, a specific allowance is recorded as a component of the allowance for loan and lease losses. Alternatively, consumer real estate TDRs that are considered to be dependent solely on the collateral for repayment (e.g., due to the lack of income verification) are measured based on the estimated fair value of the collateral and a charge-off is recorded if the carrying value exceeds the fair value of the collateral. Consumer real estate loans that reached 180 days past due prior to modification had been charged off to their net realizable value, less costs to sell, before they were modified as TDRs in accordance with established policy. Therefore, modifications of consumer real estate loans that are 180 or more days past due as TDRs do not have an impact on the allowance for loan and lease losses nor are additional charge-offs required at the time of modification. Subsequent declines in the fair value of the collateral after a loan has reached 180 days past due are recorded as charge-offs. Fully-insured loans are protected against principal loss, and therefore, the Corporation does not record an allowance for loan and lease losses on the outstanding principal balance, even after they have been modified in a TDR.



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The net present value of the estimated cash flows used to measure impairment is based on model-driven estimates of projected payments, prepayments, defaults and loss-given-default (LGD). Using statistical modeling methodologies, the Corporation estimates the probability that a loan will default prior to maturity based on the attributes of each loan. The factors that are most relevant to the probability of default are the refreshed LTV, or in the case of a subordinated lien, refreshed CLTV, borrower credit score, months since origination (i.e., vintage) and geography. Each of these factors is further broken down by present collection status (whether the loan is current, delinquent, in default or in bankruptcy). Severity (or LGD) is estimated based on the refreshed LTV for first mortgages or CLTV for subordinated liens. The estimates are based on the Corporation's historical experience as adjusted to reflect an assessment of environmental factors that may not be reflected in the historical data, such as changes in real estate values, local and national economies, underwriting standards and the regulatory environment. The probability of default models also incorporate recent experience with modification programs including redefaults subsequent to modification, a loan's default history prior to modification and the change in borrower payments post-modification.

At September 30, 2016 and December 31, 2015, remaining commitments to lend additional funds to debtors whose terms have been modified in a consumer real estate TDR were immaterial. Consumer real estate foreclosed properties totaled \$372 million and \$444 million at September 30, 2016 and December 31, 2015. The carrying value of consumer real estate loans, including fully-insured and PCI loans, for which formal foreclosure proceedings were in process as of September 30, 2016 was \$4.9 billion. During the three and nine months ended September 30, 2016, the Corporation reclassified \$326 million and \$1.1 billion of consumer real estate loans to foreclosed properties or, for properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans), to other assets. This compared to reclassifications of \$499 million and \$1.6 billion for the same periods in 2015. The reclassifications represent non-cash investing activities and, accordingly, are not reflected on the Consolidated Statement of Cash Flows.

The table below provides the unpaid principal balance, carrying value and related allowance at September 30, 2016 and December 31, 2015, and the average carrying value and interest income recognized for the three and nine months ended September 30, 2016 and 2015 for impaired loans in the Corporation's Consumer Real Estate portfolio segment. Certain impaired consumer real estate loans do not have a related allowance as the current valuation of these impaired loans exceeded the carrying value, which is net of previously recorded charge-offs.

## Impaired Loans – Consumer Real Estate

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Unpaid Principal Balance	Carrying Value	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance
With no recorded allowance						
Residential mortgage	\$11,948	\$ 9,369	\$—	\$14,888	\$11,901	\$ —
Home equity	3,734	1,959	—	3,545	1,775	—
With an allowance recorded						
Residential mortgage	\$4,452	\$ 4,335	\$242	\$6,624	\$6,471	\$ 399
Home equity	940	844	142	1,047	911	235
Total						
Residential mortgage	\$16,400	\$ 13,704	\$242	\$21,512	\$18,372	\$ 399
Home equity	4,674	2,803	142	4,592	2,686	235
	Three Months Ended	September 30		Nine Months Ended	September 30	
	2016	2015		2016	2015	
	Average Interest	Average Interest		Average Interest	Average Interest	
	Carrying Income	Carrying Income		Carrying Income	Carrying Income	



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	Value	Recognized	Value	Recognized	Value	Recognized	Value	Recognized
		(1)		(1)		(1)		(1)
With no recorded allowance								
Residential mortgage	\$9,673	\$ 83	\$13,202	\$ 97	\$10,523	\$277	\$14,332	\$ 310
Home equity	1,964	37	1,835	23	1,883	67	1,777	68
With an allowance recorded								
Residential mortgage	\$4,676	\$ 36	\$7,398	\$ 61	\$5,371	\$133	\$7,563	\$ 186
Home equity	822	7	809	6	863	18	756	18
Total								
Residential mortgage	\$14,349	\$ 119	\$20,600	\$ 158	\$15,894	\$410	\$21,895	\$ 496
Home equity	2,786	44	2,644	29	2,746	85	2,533	86

Interest income recognized includes interest accrued and collected on the outstanding balances of accruing (1) impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

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The table below presents the September 30, 2016 and 2015 unpaid principal balance, carrying value, and average pre- and post-modification interest rates on consumer real estate loans that were modified in TDRs during the three and nine months ended September 30, 2016 and 2015, and net charge-offs recorded during the period in which the modification occurred. The following Consumer Real Estate portfolio segment tables include loans that were initially classified as TDRs during the period and also loans that had previously been classified as TDRs and were modified again during the period.

Consumer Real Estate – TDRs Entered into During the Three Months Ended September 30, 2016 and 2015 <sup>(1)</sup>

(Dollars in millions)	September 30, 2016					Three Months Ended September 30, 2016
	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate <sup>(2)</sup>		Net Charge-offs <sup>(3)</sup>
Residential mortgage	\$487	\$ 445	4.83 %	4.51 %		\$ 4
Home equity	292	223	4.95	3.41		17
Total	\$779	\$ 668	4.87	4.10		\$ 21

(Dollars in millions)	September 30, 2015					Three Months Ended September 30, 2015
	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate <sup>(2)</sup>		Net Charge-offs <sup>(3)</sup>
Residential mortgage	\$1,163	\$ 1,030	4.91 %	4.71 %		\$ 28
Home equity	302	243	3.41	3.34		25
Total	\$1,465	\$ 1,273	4.60	4.42		\$ 53

Consumer Real Estate – TDRs Entered into During the Nine Months Ended September 30, 2016 and 2015 <sup>(1)</sup>

(Dollars in millions)	September 30, 2016					Nine Months Ended September 30, 2016
	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate <sup>(2)</sup>		Net Charge-offs <sup>(3)</sup>
Residential mortgage	\$1,039	\$ 942	4.77 %	4.29 %		\$ 9
Home equity	718	552	4.03	2.87		43
Total	\$1,757	\$ 1,494	4.47	3.71		\$ 52

  

(Dollars in millions)	September 30, 2015					Nine Months Ended September 30, 2015
	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate <sup>(2)</sup>		Net Charge-offs <sup>(3)</sup>
Residential mortgage	\$3,052	\$ 2,707	4.99 %	4.47 %		\$ 70
Home equity	824	637	3.55	3.20		55
Total	\$3,876	\$ 3,344	4.69	4.20		\$ 125

- During the three and nine months ended September 30, 2016, the Corporation forgave principal of \$1 million and
- (1) \$12 million related to residential mortgage loans in connection with TDRs compared to \$48 million and \$371 million for the same periods in 2015.
  - (2) The post-modification interest rate reflects the interest rate applicable only to permanently completed modifications, which exclude loans that are in a trial modification period.
  - (3) Net charge-offs include amounts recorded on loans modified during the period that are no longer held by the Corporation at September 30, 2016 and 2015 due to sales and other dispositions.

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The table below presents the September 30, 2016 and 2015 carrying value for consumer real estate loans that were modified in a TDR during the three and nine months ended September 30, 2016 and 2015 by type of modification.

## Consumer Real Estate – Modification Programs

(Dollars in millions)	TDRs Entered into During the Three Months Ended September 30, 2016		
	Residential Mortgage	Home Equity	Total Carrying Value
Modifications under government programs			
Contractual interest rate reduction	\$12	\$ 6	\$ 18
Principal and/or interest forbearance	—	2	2
Other modifications <sup>(1)</sup>	3	—	3
Total modifications under government programs	15	8	23
Modifications under proprietary programs			
Contractual interest rate reduction	19	1	20
Capitalization of past due amounts	4	—	4
Principal and/or interest forbearance	2	—	2
Other modifications <sup>(1)</sup>	1	44	45
Total modifications under proprietary programs	26	45	71
Trial modifications	343	147	490
Loans discharged in Chapter 7 bankruptcy <sup>(2)</sup>	61	23	84
Total modifications	\$445	\$ 223	\$ 668

	TDRs Entered into During the Three Months Ended September 30, 2015		
Modifications under government programs			
Contractual interest rate reduction	\$67	\$ 2	\$ 69
Principal and/or interest forbearance	—	1	1
Other modifications <sup>(1)</sup>	7	—	7
Total modifications under government programs	74	3	77
Modifications under proprietary programs			
Contractual interest rate reduction	46	—	46
Capitalization of past due amounts	16	—	16
Principal and/or interest forbearance	4	1	5
Other modifications <sup>(1)</sup>	5	1	6
Total modifications under proprietary programs	71	2	73
Trial modifications	793	210	1,003
Loans discharged in Chapter 7 bankruptcy <sup>(2)</sup>	92	28	120
Total modifications	\$1,030	\$ 243	\$ 1,273

<sup>(1)</sup> Includes other modifications such as term or payment extensions and repayment plans.

<sup>(2)</sup> Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

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## Consumer Real Estate – Modification Programs

(Dollars in millions)	TDRs Entered into During the Nine Months Ended September 30, 2016		
	Residential Mortgage	Home Equity	Total Carrying Value
Modifications under government programs			
Contractual interest rate reduction	\$96	\$ 25	\$ 121
Principal and/or interest forbearance	2	9	11
Other modifications <sup>(1)</sup>	20	1	21
Total modifications under government programs	118	35	153
Modifications under proprietary programs			
Contractual interest rate reduction	58	85	143
Capitalization of past due amounts	20	7	27
Principal and/or interest forbearance	9	38	47
Other modifications <sup>(1)</sup>	3	69	72
Total modifications under proprietary programs	90	199	289
Trial modifications	593	260	853
Loans discharged in Chapter 7 bankruptcy <sup>(2)</sup>	141	58	199
Total modifications	\$942	\$ 552	\$ 1,494

(Dollars in millions)	TDRs Entered into During the Nine Months Ended September 30, 2015		
	Residential Mortgage	Home Equity	Total Carrying Value
Modifications under government programs			
Contractual interest rate reduction	\$453	\$ 18	\$ 471
Principal and/or interest forbearance	4	7	11
Other modifications <sup>(1)</sup>	35	—	35
Total modifications under government programs	492	25	517
Modifications under proprietary programs			
Contractual interest rate reduction	179	18	197
Capitalization of past due amounts	67	6	73
Principal and/or interest forbearance	101	32	133
Other modifications <sup>(1)</sup>	22	52	74
Total modifications under proprietary programs	369	108	477
Trial modifications	1,609	402	2,011
Loans discharged in Chapter 7 bankruptcy <sup>(2)</sup>	237	102	339
Total modifications	\$2,707	\$ 637	\$ 3,344

<sup>(1)</sup> Includes other modifications such as term or payment extensions and repayment plans.

<sup>(2)</sup> Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

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The table below presents the carrying value of consumer real estate loans that entered into payment default during the three and nine months ended September 30, 2016 and 2015 that were modified in a TDR during the 12 months preceding payment default. A payment default for consumer real estate TDRs is recognized when a borrower has missed three monthly payments (not necessarily consecutively) since modification. Payment defaults on a trial modification where the borrower has not yet met the terms of the agreement are included in the table below if the borrower is 90 days or more past due three months after the offer to modify is made.

## Consumer Real Estate – TDRs Entering Payment Default That Were Modified During the Preceding 12 Months

(Dollars in millions)	Three Months Ended September 30, 2016		
	Residential Mortgage	Home Equity	Total Carrying Value
Modifications under government programs	\$50	\$ 1	\$ 51
Modifications under proprietary programs	29	11	40
Loans discharged in Chapter 7 bankruptcy <sup>(1)</sup>	36	6	42
Trial modifications	138	23	161
Total modifications	\$253	\$ 41	\$ 294

	Three Months Ended September 30, 2015		
Modifications under government programs	\$117	\$ 2	\$ 119
Modifications under proprietary programs	97	1	98
Loans discharged in Chapter 7 bankruptcy <sup>(1)</sup>	57	20	77
Trial modifications <sup>(2)</sup>	327	49	376
Total modifications	\$598	\$ 72	\$ 670

	Nine Months Ended September 30, 2016		
Modifications under government programs	\$228	\$ 2	\$ 230
Modifications under proprietary programs	107	38	145
Loans discharged in Chapter 7 bankruptcy <sup>(1)</sup>	107	17	124
Trial modifications	559	89	648
Total modifications	\$1,001	\$ 146	\$ 1,147

	Nine Months Ended September 30, 2015		
Modifications under government programs	\$323	\$ 4	\$ 327
Modifications under proprietary programs	175	19	194
Loans discharged in Chapter 7 bankruptcy <sup>(1)</sup>	189	40	229
Trial modifications <sup>(2)</sup>	2,563	100	2,663
Total modifications	\$3,250	\$ 163	\$ 3,413

<sup>(1)</sup> Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs. Includes \$59 million and \$1.6 billion for the three and nine months ended September 30, 2015 of trial modification

<sup>(2)</sup> offers made in connection with the August 2014 U.S. Department of Justice settlement to which the customer did not respond.

Credit Card and Other Consumer

Impaired loans within the Credit Card and Other Consumer portfolio segment consist entirely of loans that have been modified in TDRs (the renegotiated credit card and other consumer TDR portfolio, collectively referred to as the renegotiated TDR portfolio). The Corporation seeks to assist customers that are experiencing financial difficulty by modifying loans while ensuring compliance with federal, local and international laws and guidelines. Credit card and other consumer loan modifications generally involve reducing the interest rate on the account and placing the customer on a fixed payment plan not exceeding 60 months, all of which are considered TDRs. In addition, the accounts of non-U.S. credit card customers who do not qualify for a fixed payment plan may have their interest rates reduced, as required by certain local jurisdictions. These modifications, which are also TDRs, tend to experience higher payment default rates given that the borrowers may lack the ability to repay even with the interest rate reduction. In substantially all cases, the customer's available line of credit is canceled. The Corporation makes loan modifications directly with borrowers for debt held only by the Corporation (internal programs). Additionally, the Corporation makes loan modifications for borrowers working with third-party renegotiation agencies that provide solutions to customers' entire unsecured debt structures (external programs). The Corporation classifies other secured consumer loans that have been discharged in Chapter 7 bankruptcy as TDRs which are written down to collateral value and placed on

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nonaccrual status no later than the time of discharge. For more information on the regulatory guidance on loans discharged in Chapter 7 bankruptcy, see Nonperforming Loans and Leases in this Note.

All credit card and substantially all other consumer loans that have been modified in TDRs remain on accrual status until the loan is either paid in full or charged off, which occurs no later than the end of the month in which the loan becomes 180 days past due or generally at 120 days past due for a loan that has been placed on a fixed payment plan.

The allowance for impaired credit card and substantially all other consumer loans is based on the present value of projected cash flows, which incorporates the Corporation's historical payment default and loss experience on modified loans, discounted using the portfolio's average contractual interest rate, excluding promotionally priced loans, in effect prior to restructuring. Credit card and other consumer loans are included in homogeneous pools which are collectively evaluated for impairment. For these portfolios, loss forecast models are utilized that consider a variety of factors including, but not limited to, historical loss experience, delinquency status, economic trends and credit scores.

The table below provides the unpaid principal balance, carrying value and related allowance at September 30, 2016 and December 31, 2015, and the average carrying value and interest income recognized for the three and nine months ended September 30, 2016 and 2015 on the Corporation's renegotiated TDR portfolio in the Credit Card and Other Consumer portfolio segment.

## Impaired Loans – Credit Card and Other Consumer – Renegotiated TDRs

(Dollars in millions)	September 30, 2016			December 31, 2015				
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance		
With no recorded allowance								
Direct/Indirect consumer	\$47	\$ 20	\$—	\$50	\$21	\$ —		
With an allowance recorded								
U.S. credit card	\$500	\$ 507	\$123	\$598	\$611	\$ 176		
Non-U.S. credit card	91	104	62	109	126	70		
Direct/Indirect consumer	5	6	1	17	21	4		
Total								
U.S. credit card	\$500	\$ 507	\$123	\$598	\$611	\$ 176		
Non-U.S. credit card	91	104	62	109	126	70		
Direct/Indirect consumer	52	26	1	67	42	4		
	Three Months Ended September 30			Nine Months Ended September 30				
	2016		2015		2016		2015	
	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized
With no recorded allowance								
Direct/Indirect consumer	\$21	\$ —	\$22	\$ —	\$21	\$—	\$23	\$ —
With an allowance recorded								
U.S. credit card	\$539	\$ 7	\$714	\$ 10	\$571	\$24	\$779	\$ 34
Non-U.S. credit card	107	—	142	1	115	2	150	3
Direct/Indirect consumer	7	—	40	1	12	—	60	3
Total								



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U.S. credit card	\$539	\$	7	\$714	\$	10	\$571	\$24	\$779	\$	34
Non-U.S. credit card	107	—		142	1		115	2	150	3	
Direct/Indirect consumer	28	—		62	1		33	—	83	3	

(1) Includes accrued interest and fees.

Interest income recognized includes interest accrued and collected on the outstanding balances of accruing

(2) impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

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The table below provides information on the Corporation's primary modification programs for the renegotiated TDR portfolio at September 30, 2016 and December 31, 2015.

## Credit Card and Other Consumer – Renegotiated TDRs by Program Type

(Dollars in millions)	Internal Programs		External Programs		Other <sup>(1)</sup>		Total		Percent of Balances Current or Less Than 30 Days Past Due	
	September 2016	December 2015	September 2016	December 2015	September 2016	December 2015	September 2016	December 2015	September 2016	December 2015
									%	%
U.S. credit card	\$ 237	\$ 313	\$ 269	\$ 296	\$ 1	\$ 2	\$ 507	\$ 611	89.08%	88.74 %
Non-U.S. credit card	12	21	8	10	84	95	104	126	42.84	44.25
Direct/Indirect consumer	3	11	2	7	21	24	26	42	91.75	89.12
Total renegotiated TDRs	\$ 252	\$ 345	\$ 279	\$ 313	\$ 106	\$ 121	\$ 637	\$ 779	81.65	81.55

<sup>(1)</sup> Other TDRs for non-U.S. credit card include modifications of accounts that are ineligible for a fixed payment plan.

The table below provides information on the Corporation's renegotiated TDR portfolio including the September 30, 2016 and 2015 unpaid principal balance, carrying value and average pre- and post-modification interest rates of loans that were modified in TDRs during the three and nine months ended September 30, 2016 and 2015, and net charge-offs recorded during the period in which the modification occurred.

## Credit Card and Other Consumer – Renegotiated TDRs Entered into During the Three Months Ended September 30, 2016 and 2015

(Dollars in millions)	September 30, 2016				Three Months Ended September 30, 2016	
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Pre-Modification Interest Rate	Post-Modification Interest Rate	Net Charge-offs	
U.S. credit card	\$46	\$ 50	17.48 %	5.33 %	\$ 4	
Non-U.S. credit card	32	36	24.11	0.38	20	
Direct/Indirect consumer	7	4	4.13	4.08	2	
Total	\$85	\$ 90	19.55	3.27	\$ 26	

  

(Dollars in millions)	September 30, 2015				Three Months Ended September 30, 2015	
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Pre-Modification Interest Rate	Post-Modification Interest Rate	Net Charge-offs	
U.S. credit card	\$59	\$ 65	17.10 %	4.97 %	\$ 8	
Non-U.S. credit card	32	38	24.04	0.43	23	
Direct/Indirect consumer	7	4	5.58	5.10	2	
Total	\$98	\$ 107	19.12	3.37	\$ 33	

Credit Card and Other Consumer – Renegotiated TDRs Entered into During the Nine Months Ended September 30, 2016 and 2015

	September 30, 2016				Nine Months Ended September 30, 2016		
U.S. credit card	\$126	\$ 134	17.42	%	5.45	%	\$ 8
Non-U.S. credit card	63	73	23.93		0.44		28
Direct/Indirect consumer	16	9	4.50		4.33		7
Total	\$205	\$ 216	19.05		3.72		\$ 43
	September 30, 2015				Nine Months Ended September 30, 2015		
U.S. credit card	\$172	\$ 184	16.98	%	5.02	%	\$ 16
Non-U.S. credit card	72	84	24.01		0.45		35
Direct/Indirect consumer	16	10	6.28		5.29		7
Total	\$260	\$ 278	18.72		3.65		\$ 58

(1) Includes accrued interest and fees.

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The table below provides information on the Corporation's primary modification programs for the renegotiated TDR portfolio for loans that were modified in TDRs during the three and nine months September 30, 2016 and 2015.

## Credit Card and Other Consumer – Renegotiated TDRs

## Entered into During the Period by Program Type

(Dollars in millions)	Three Months Ended			Total
	Internal Programs	External Programs	Other (1)	
	September 30, 2016			
U.S. credit card	\$27	\$ 23	\$ —	\$50
Non-U.S. credit card	1	1	34	36
Direct/Indirect consumer	—	—	4	4
Total renegotiated TDRs	\$28	\$ 24	\$ 38	\$90

	Three Months Ended			
	Internal Programs	External Programs	Other (1)	
	September 30, 2015			
U.S. credit card	\$41	\$ 24	\$ —	\$65
Non-U.S. credit card	1	1	36	38
Direct/Indirect consumer	—	—	4	4
Total renegotiated TDRs	\$42	\$ 25	\$ 40	\$107

	Nine Months Ended			
	Internal Programs	External Programs	Other (1)	
	September 30, 2016			
U.S. credit card	\$71	\$ 63	\$ —	\$134
Non-U.S. credit card	2	3	68	73
Direct/Indirect consumer	—	—	9	9
Total renegotiated TDRs	\$73	\$ 66	\$ 77	\$216

	Nine Months Ended			
	Internal Programs	External Programs	Other (1)	
	September 30, 2015			
U.S. credit card	\$118	\$ 66	\$ —	\$184
Non-U.S. credit card	3	3	78	84
Direct/Indirect consumer	1	—	9	10
Total renegotiated TDRs	\$122	\$ 69	\$ 87	\$278

(1) Other TDRs for non-U.S. credit card include modifications of accounts that are ineligible for a fixed payment plan.

Credit card and other consumer loans are deemed to be in payment default during the quarter in which a borrower misses the second of two consecutive payments. Payment defaults are one of the factors considered when projecting future cash flows in the calculation of the allowance for loan and lease losses for impaired credit card and other consumer loans. Based on historical experience, the Corporation estimates that 14 percent of new U.S. credit card TDRs, 90 percent of new non-U.S. credit card TDRs and 14 percent of new direct/indirect consumer TDRs may be in payment default within 12 months after modification. Loans that entered into payment default during the three and nine months ended September 30, 2016 that had been modified in a TDR during the preceding 12 months were \$7 million and \$23 million for U.S. credit card, \$31 million and \$95 million for non-U.S. credit card, and \$0 and \$2 million for direct/indirect consumer. During the three and nine months ended September 30, 2015, loans that entered into payment default that had been modified in a TDR during the preceding 12 months were \$11 million and \$33 million for U.S. credit card, \$37 million and \$117 million for non-U.S. credit card, and \$1 million and \$3 million for direct/indirect consumer.



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Commercial Loans

Impaired commercial loans, which include nonperforming loans and TDRs (both performing and nonperforming), are primarily measured based on the present value of payments expected to be received, discounted at the loan's original effective interest rate. Commercial impaired loans may also be measured based on observable market prices or, for loans that are solely dependent on the collateral for repayment, the estimated fair value of collateral, less costs to sell. If the carrying value of a loan exceeds this amount, a specific allowance is recorded as a component of the allowance for loan and lease losses.

Modifications of loans to commercial borrowers that are experiencing financial difficulty are designed to reduce the Corporation's loss exposure while providing the borrower with an opportunity to work through financial difficulties, often to avoid foreclosure or bankruptcy. Each modification is unique and reflects the individual circumstances of the borrower. Modifications that result in a TDR may include extensions of maturity at a concessionary (below market) rate of interest, payment forbearances or other actions designed to benefit the customer while mitigating the Corporation's risk exposure. Reductions in interest rates are rare. Instead, the interest rates are typically increased, although the increased rate may not represent a market rate of interest. Infrequently, concessions may also include principal forgiveness in connection with foreclosure, short sale or other settlement agreements leading to termination or sale of the loan.

At the time of restructuring, the loans are remeasured to reflect the impact, if any, on projected cash flows resulting from the modified terms. If there was no forgiveness of principal and the interest rate was not decreased, the modification may have little or no impact on the allowance established for the loan. If a portion of the loan is deemed to be uncollectible, a charge-off may be recorded at the time of restructuring. Alternatively, a charge-off may have already been recorded in a previous period such that no charge-off is required at the time of modification. For more information on modifications for the U.S. small business commercial portfolio, see Credit Card and Other Consumer in this Note.

Remaining commitments to lend additional funds to debtors whose terms have been modified in a commercial loan TDR were \$487 million and \$187 million at September 30, 2016 and December 31, 2015. Commercial foreclosed properties totaled \$16 million and \$15 million at September 30, 2016 and December 31, 2015.



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Non-U.S. commercial	429	5	155	1	390	11	126	3
U.S. small business commercial <sup>(1)</sup>	81	1	110	—	91	1	112	—

<sup>(1)</sup> Includes U.S. small business commercial renegotiated TDR loans and related allowance.

Interest income recognized includes interest accrued and collected on the outstanding balances of accruing

<sup>(2)</sup> impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.



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The table below presents the September 30, 2016 and 2015 unpaid principal balance and carrying value of commercial loans that were modified as TDRs during the three and nine months ended September 30, 2016 and 2015, and net charge-offs that were recorded during the period in which the modification occurred. The table below includes loans that were initially classified as TDRs during the period and also loans that had previously been classified as TDRs and were modified again during the period.

## Commercial – TDRs Entered into During the Three Months Ended September 30, 2016 and 2015

(Dollars in millions)	September 30, 2016		Three Months Ended September 30, 2016
	Unpaid Principal Balance	Carrying Value	Net Charge-offs
U.S. commercial	\$793	\$768	\$ 14
Commercial real estate	4	4	—
Commercial lease financing	2	2	—
Non-U.S. commercial	17	17	—
U.S. small business commercial <sup>(1)</sup>	1	1	—
Total	\$817	\$792	\$ 14

(Dollars in millions)	September 30, 2015		Three Months Ended September 30, 2015
	Unpaid Principal Balance	Carrying Value	Net Charge-offs
U.S. commercial	\$347	\$324	\$ 12
Commercial real estate	17	17	—
Non-U.S. commercial	10	10	—
U.S. small business commercial <sup>(1)</sup>	2	2	—
Total	\$376	\$353	\$ 12

## Commercial – TDRs Entered into During the Nine Months Ended September 30, 2016 and 2015

(Dollars in millions)	September 30, 2016		Nine Months Ended September 30, 2016
	Unpaid Principal Balance	Carrying Value	Net Charge-offs
U.S. commercial	\$1,483	\$1,447	\$ 43
Commercial real estate	11	11	1
Commercial lease financing	7	4	2
Non-U.S. commercial	265	201	48
U.S. small business commercial <sup>(1)</sup>	4	4	—
Total	\$1,770	\$1,667	\$ 94

	September 30, 2015		Nine Months Ended September 30, 2015
U.S. commercial	\$977	\$ 900	\$ 18
Commercial real estate	47	47	—
Non-U.S. commercial	45	45	—
U.S. small business commercial <sup>(1)</sup>	5	5	—
Total	\$1,074	\$ 997	\$ 18

<sup>(1)</sup> U.S. small business commercial TDRs are comprised of renegotiated small business card loans.

A commercial TDR is generally deemed to be in payment default when the loan is 90 days or more past due, including delinquencies that were not resolved as part of the modification. U.S. small business commercial TDRs are deemed to be in payment default during the quarter in which a borrower misses the second of two consecutive payments.

Payment defaults are one of the factors considered when projecting future cash flows, along with observable market prices or fair value of collateral when measuring the allowance for loan and lease losses. TDRs that were in payment default had a carrying value of \$123 million and \$85 million for U.S. commercial, \$17 million and \$26 million for commercial real estate, and \$2 million and \$0 for U.S. small business commercial at September 30, 2016 and 2015.

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## Purchased Credit-impaired Loans

The table below shows activity for the accretable yield on PCI loans, which include the Countrywide Financial Corporation (Countrywide) portfolio and loans repurchased in connection with the 2013 settlement with FNMA. The amount of accretable yield is affected by changes in credit outlooks, including metrics such as default rates and loss severities, prepayment speeds, which can change the amount and period of time over which interest payments are expected to be received, and the interest rates on variable rate loans. The reclassifications from nonaccretable difference in the three and nine months ended September 30, 2016 were primarily due to an increase in the expected principal and interest cash flows due to lower default estimates.

## Rollforward of Accretable Yield

(Dollars in millions)	Three Months Ended September 30, 2016	Nine Months Ended September 30, 2016
Accretable yield, beginning of period	\$ 4,042	\$ 4,569
Accretion	(176 )	(553 )
Disposals/transfers	(129 )	(364 )
Reclassifications from nonaccretable difference	34	119
Accretable yield, September 30, 2016	\$ 3,771	\$ 3,771

During the three and nine months ended September 30, 2016, the Corporation sold PCI loans with a carrying value of \$111 million and \$435 million, which excludes the related allowance of \$11 million and \$50 million. During the three and nine months ended September 30, 2015, the Corporation sold PCI loans with a carrying value of \$220 million and \$1.2 billion, which excludes the related allowance of \$38 million and \$213 million. For more information on PCI loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K, and for the carrying value and valuation allowance for PCI loans, see Note 5 – Allowance for Credit Losses.

## Loans Held-for-sale

The Corporation had LHFS of \$10.6 billion and \$7.5 billion at September 30, 2016 and December 31, 2015. Cash and non-cash proceeds from sales and paydowns of loans originally classified as LHFS were \$22.1 billion and \$31.7 billion for the nine months ended September 30, 2016 and 2015. Cash used for originations and purchases of LHFS totaled \$24.2 billion and \$29.7 billion for the nine months ended September 30, 2016 and 2015.

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## NOTE 5 – Allowance for Credit Losses

The table below summarizes the changes in the allowance for credit losses by portfolio segment for the three and nine months ended September 30, 2016 and 2015.

(Dollars in millions)	Three Months Ended September 30, 2016			
	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total Allowance
Allowance for loan and lease losses, July 1	\$3,209	\$ 3,334	\$ 5,294	\$ 11,837
Loans and leases charged off	(246 )	(868 )	(163 )	(1,277 )
Recoveries of loans and leases previously charged off	145	191	53	389
Net charge-offs	(101 )	(677 )	(110 )	(888 )
Write-offs of PCI loans	(83 )	—	—	(83 )
Provision for loan and lease losses	(36 )	741	129	834
Other <sup>(1)</sup>	—	(8 )	—	(8 )
Allowance for loan and lease losses, September 30	2,989	3,390	5,313	11,692
Reserve for unfunded lending commitments, July 1	—	—	750	750
Provision for unfunded lending commitments	—	—	16	16
Other <sup>(1)</sup>	—	—	1	1
Reserve for unfunded lending commitments, September 30	—	—	767	767
Allowance for credit losses, September 30	\$2,989	\$ 3,390	\$ 6,080	\$ 12,459
	Three Months Ended September 30, 2015			
Allowance for loan and lease losses, July 1	\$4,741	\$ 3,702	\$ 4,625	\$ 13,068
Loans and leases charged off	(345 )	(873 )	(157 )	(1,375 )
Recoveries of loans and leases previously charged off	199	198	46	443
Net charge-offs	(146 )	(675 )	(111 )	(932 )
Write-offs of PCI loans	(148 )	—	—	(148 )
Provision for loan and lease losses	(12 )	554	191	733
Other <sup>(1)</sup>	(35 )	(29 )	—	(64 )
Allowance for loan and lease losses, September 30	4,400	3,552	4,705	12,657
Reserve for unfunded lending commitments, July 1	—	—	588	588
Provision for unfunded lending commitments	—	—	73	73
Reserve for unfunded lending commitments, September 30	—	—	661	661
Allowance for credit losses, September 30	\$4,400	\$ 3,552	\$ 5,366	\$ 13,318
	Nine Months Ended September 30, 2016			
Allowance for loan and lease losses, January 1	\$3,914	\$ 3,471	\$ 4,849	\$ 12,234
Loans and leases charged off	(928 )	(2,664 )	(559 )	(4,151 )
Recoveries of loans and leases previously charged off	464	584	162	1,210
Net charge-offs	(464 )	(2,080 )	(397 )	(2,941 )
Write-offs of PCI loans	(270 )	—	—	(270 )
Provision for loan and lease losses	(191 )	2,031	962	2,802
Other <sup>(1)</sup>	—	(32 )	(101 )	(133 )
Allowance for loan and lease losses, September 30	2,989	3,390	5,313	11,692
Reserve for unfunded lending commitments, January 1	—	—	646	646
Provision for unfunded lending commitments	—	—	21	21

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Other <sup>(1)</sup>	—	—	100	100
Reserve for unfunded lending commitments, September 30	—	—	767	767
Allowance for credit losses, September 30	\$2,989	\$ 3,390	\$ 6,080	\$ 12,459

	Nine Months Ended September 30, 2015			
Allowance for loan and lease losses, January 1	\$5,935	\$ 4,047	\$ 4,437	\$ 14,419
Loans and leases charged off	(1,430 )	(2,733 )	(410 )	(4,573 )
Recoveries of loans and leases previously charged off	587	618	174	1,379
Net charge-offs	(843 )	(2,115 )	(236 )	(3,194 )
Write-offs of PCI loans	(726 )	—	—	(726 )
Provision for loan and lease losses	68	1,646	504	2,218
Other <sup>(1)</sup>	(34 )	(26 )	—	(60 )
Allowance for loan and lease losses, September 30	4,400	3,552	4,705	12,657
Reserve for unfunded lending commitments, January 1	—	—	528	528
Provision for unfunded lending commitments	—	—	133	133
Reserve for unfunded lending commitments, September 30	—	—	661	661
Allowance for credit losses, September 30	\$4,400	\$ 3,552	\$ 5,366	\$ 13,318

<sup>(1)</sup> Primarily represents the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments and certain other reclassifications.



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Allowance for loan and lease losses	\$3,914	\$ 3,471	\$ 4,849	\$ 12,234
Carrying value <sup>(3, 4)</sup>	263,859	190,439	435,747	890,045
Allowance as a percentage of carrying value <sup>(4)</sup>	1.48	% 1.82	% 1.11	% 1.37

Impaired loans include nonperforming commercial loans and all TDRs, including both commercial and consumer

- (1) TDRs. Impaired loans exclude nonperforming consumer loans unless they are TDRs, and all consumer and commercial loans accounted for under the fair value option.
- (2) Allowance for loan and lease losses includes \$30 million and \$35 million related to impaired U.S. small business commercial at September 30, 2016 and December 31, 2015.
- (3) Amounts are presented gross of the allowance for loan and lease losses.
- (4) Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of \$8.1 billion and \$6.9 billion at September 30, 2016 and December 31, 2015.

n/a = not applicable

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## NOTE 6 – Securitizations and Other Variable Interest Entities

The Corporation utilizes VIEs in the ordinary course of business to support its own and its customers' financing and investing needs. The Corporation routinely securitizes loans and debt securities using VIEs as a source of funding for the Corporation and as a means of transferring the economic risk of the loans or debt securities to third parties. The assets are transferred into a trust or other securitization vehicle such that the assets are legally isolated from the creditors of the Corporation and are not available to satisfy its obligations. These assets can only be used to settle obligations of the trust or other securitization vehicle. The Corporation also administers, structures or invests in other VIEs including CDOs, investment vehicles and other entities. For more information on the Corporation's utilization of VIEs, see Note 1 – Summary of Significant Accounting Principles and Note 6 – Securitizations and Other Variable Interest Entities to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

The tables in this Note present the assets and liabilities of consolidated and unconsolidated VIEs at September 30, 2016 and December 31, 2015, in situations where the Corporation has continuing involvement with transferred assets or if the Corporation otherwise has a variable interest in the VIE. The tables also present the Corporation's maximum loss exposure at September 30, 2016 and December 31, 2015 resulting from its involvement with consolidated VIEs and unconsolidated VIEs in which the Corporation holds a variable interest. The Corporation's maximum loss exposure is based on the unlikely event that all of the assets in the VIEs become worthless and incorporates not only potential losses associated with assets recorded on the Consolidated Balance Sheet but also potential losses associated with off-balance sheet commitments such as unfunded liquidity commitments and other contractual arrangements. The Corporation's maximum loss exposure does not include losses previously recognized through write-downs of assets. As a result of new accounting guidance issued by the FASB, which was effective on January 1, 2016, the Corporation identified certain limited partnerships and similar entities that are now considered to be VIEs and are included in the unconsolidated VIE tables in this Note at September 30, 2016. The Corporation had a maximum loss exposure of \$4.9 billion related to these VIEs, which had total assets of \$13.4 billion.

The Corporation invests in asset-backed securities (ABS) issued by third-party VIEs with which it has no other form of involvement and enters into certain commercial lending arrangements that may also incorporate the use of VIEs to hold collateral. These securities and loans are included in Note 3 – Securities or Note 4 – Outstanding Loans and Leases. In addition, the Corporation uses VIEs such as trust preferred securities trusts in connection with its funding activities. For additional information, see Note 11 – Long-term Debt to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K. The Corporation uses VIEs, such as common trust funds managed within GWIM, to provide investment opportunities for clients. These VIEs, which are generally not consolidated by the Corporation, as applicable, are not included in the tables in this Note.

Except as described below and in Note 6 – Securitizations and Other Variable Interest Entities to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K, the Corporation did not provide financial support to consolidated or unconsolidated VIEs during the nine months ended September 30, 2016 or the year ended December 31, 2015 that it was not previously contractually required to provide, nor does it intend to do so.

## First-lien Mortgage Securitizations

## First-lien Mortgages

As part of its mortgage banking activities, the Corporation securitizes a portion of the first-lien residential mortgage loans it originates or purchases from third parties, generally in the form of RMBS guaranteed by government-sponsored enterprises, FNMA and FHLMC (collectively the GSEs), or Government National Mortgage Association (GNMA) primarily in the case of FHA-insured and U.S. Department of Veterans Affairs (VA)-guaranteed mortgage loans. Securitization usually occurs in conjunction with or shortly after origination or purchase and the



Corporation may also securitize loans held in its residential mortgage portfolio. In addition, the Corporation may, from time to time, securitize commercial mortgages it originates or purchases from other entities. The Corporation typically services the loans it securitizes. Further, the Corporation may retain beneficial interests in the securitization trusts including senior and subordinate securities and equity tranches issued by the trusts. Except as described below and in Note 7 – Representations and Warranties Obligations and Corporate Guarantees, the Corporation does not provide guarantees or recourse to the securitization trusts other than standard representations and warranties.

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The table below summarizes select information related to first-lien mortgage securitizations for the three and nine months ended September 30, 2016 and 2015.

## First-lien Mortgage Securitizations

	Three Months Ended September 30			
	Residential Mortgage		Commercial Mortgage	
	Agency			
(Dollars in millions)	2016	2015	2016	2015
Cash proceeds from new securitizations <sup>(1)</sup>	\$7,131	\$7,632	\$1,052	\$807
Gain on securitizations <sup>(2)</sup>	89	118	27	14
	Nine Months Ended September 30			
	2016	2015	2016	2015
Cash proceeds from new securitizations <sup>(1)</sup>	\$18,580	\$22,304	\$3,031	\$5,695
Gain on securitizations <sup>(2)</sup>	322	475	18	46

The Corporation transfers residential mortgage loans to securitizations sponsored by the GSEs or GNMA in the normal course of business and receives RMBS in exchange which may then be sold into the market to third-party investors for cash proceeds.

A majority of the first-lien residential and commercial mortgage loans securitized are initially classified as LHFS and accounted for under the fair value option. Gains recognized on these LHFS prior to securitization, which totaled \$149 million and \$349 million, net of hedges, during the three and nine months ended September 30, 2016 compared to \$192 million and \$623 million for the same periods in 2015, are not included in the table above.

In addition to cash proceeds as reported in the table above, the Corporation received securities with an initial fair value of \$1.2 billion and \$3.1 billion in connection with first-lien mortgage securitizations for the three and nine months ended September 30, 2016 compared to \$7.0 billion and \$20.0 billion for the same periods in 2015. The receipt of these securities represents non-cash operating and investing activities and, accordingly, is not reflected on the Consolidated Statement of Cash Flows. All of these securities were initially classified as Level 2 assets within the fair value hierarchy. During the three and nine months ended September 30, 2016 and 2015, there were no changes to the initial classification.

The Corporation recognizes consumer MSRs from the sale or securitization of first-lien mortgage loans. Servicing fee and ancillary fee income on consumer mortgage loans serviced, including securitizations where the Corporation has continuing involvement, were \$280 million and \$868 million during the three and nine months ended September 30, 2016 compared to \$307 million and \$1.0 billion for the same periods in 2015. Servicing advances on consumer mortgage loans, including securitizations where the Corporation has continuing involvement, were \$6.6 billion and \$7.8 billion at September 30, 2016 and December 31, 2015. The Corporation may have the option to repurchase delinquent loans out of securitization trusts, which reduces the amount of servicing advances it is required to make. During the three and nine months ended September 30, 2016, \$684 million and \$2.1 billion of loans were repurchased from first-lien securitization trusts primarily as a result of loan delinquencies or to perform modifications compared to \$511 million and \$2.4 billion for the same periods in 2015. The majority of these loans repurchased were FHA-insured mortgages collateralizing GNMA securities. For more information on MSRs, see Note 17 – Mortgage Servicing Rights.

During the three and nine months ended September 30, 2016, the Corporation deconsolidated agency residential mortgage securitization vehicles with total assets of \$326 million and \$3.1 billion following the sale of retained interests to third parties, after which the Corporation no longer had the unilateral ability to liquidate the vehicles. Gains on sale of \$11 million and \$125 million were recorded in other income in the Consolidated Statement of Income.

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The table below summarizes select information related to first-lien mortgage securitization trusts in which the Corporation held a variable interest at September 30, 2016 and December 31, 2015.

## First-lien Mortgage VIEs

(Dollars in millions)	Residential Mortgage									
	Agency		Non-agency				Alt-A		Commercial Mortgage	
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015
<b>Unconsolidated VIEs</b>										
Maximum loss exposure <sup>(1)</sup>	\$24,492	\$28,192	\$778	\$1,027	\$2,626	\$2,905	\$539	\$622	\$332	\$326
<b>On-balance sheet assets</b>										
<b>Senior securities held <sup>(2)</sup>:</b>										
Trading account assets	\$1,345	\$1,297	\$14	\$42	\$54	\$94	\$84	\$99	\$29	\$59
Debt securities carried at fair value	19,322	24,369	478	613	2,274	2,479	315	340	—	—
Held-to-maturity securities	3,812	2,511	—	—	—	—	—	—	55	37
<b>Subordinate securities held <sup>(2)</sup>:</b>										
Trading account assets	—	—	1	1	29	37	1	2	16	22
Debt securities carried at fair value	—	—	9	12	2	3	25	28	54	54
Held-to-maturity securities	—	—	—	—	—	—	—	—	13	13
Residual interests held	—	—	—	—	—	—	—	—	32	48
All other assets <sup>(3)</sup>	13	15	29	40	—	—	114	153	—	—
Total retained positions	\$24,492	\$28,192	\$531	\$708	\$2,359	\$2,613	\$539	\$622	\$199	\$233
Principal balance outstanding <sup>(4)</sup>	\$284,246	\$313,613	\$13,767	\$16,087	\$24,396	\$27,854	\$35,969	\$40,848	\$21,032	\$34,243
<b>Consolidated VIEs</b>										
Maximum loss exposure <sup>(1)</sup>	\$19,384	\$26,878	\$52	\$65	\$153	\$232	\$—	\$—	\$—	\$—
<b>On-balance sheet assets</b>										
Trading account assets	\$383	\$1,101	\$—	\$—	\$—	\$188	\$—	\$—	\$—	\$—
Loans and leases <sup>(5)</sup>	18,562	25,328	83	111	572	675	—	—	—	—
All other assets	441	449	3	—	70	54	—	—	—	—

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Total assets	\$19,386	\$26,878	\$86	\$111	\$642	\$917	\$—	\$—	\$—	\$—
On-balance sheet liabilities										
Long-term debt	\$2	\$—	\$34	\$46	\$613	\$840	\$—	\$—	\$—	\$—
All other liabilities	3	1	—	—	—	—	—	—	—	—
Total liabilities	\$5	\$1	\$34	\$46	\$613	\$840	\$—	\$—	\$—	\$—

Maximum loss exposure includes obligations under loss-sharing reinsurance and other arrangements for non-agency residential mortgage and commercial mortgage securitizations, but excludes the liability for

- (1) representations and warranties obligations and corporate guarantees and also excludes servicing advances and other servicing rights and obligations. For additional information, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees and Note 17 – Mortgage Servicing Rights.

As a holder of these securities, the Corporation receives scheduled principal and interest payments. During the

- (2) three and nine months ended September 30, 2016 and 2015, there were no OTTI losses recorded on those securities classified as AFS debt securities.

Not included in the table above are all other assets of \$326 million and \$222 million, representing the unpaid principal balance of mortgage loans eligible for repurchase from unconsolidated residential mortgage securitization

- (3) vehicles, principally guaranteed by GNMA, and all other liabilities of \$326 million and \$222 million, representing the principal amount that would be payable to the securitization vehicles if the Corporation was to exercise the repurchase option, at September 30, 2016 and December 31, 2015.

- (4) Principal balance outstanding includes loans the Corporation transferred with which it has continuing involvement, which may include servicing the loans.

- (5) Balance at September 30, 2016 includes \$655 million from consolidated collateralized financing entities (CFE) that were measured using the fair value of the financial liabilities of those entities as the measurement basis.

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## Other Asset-backed Securitizations

The table below summarizes select information related to home equity loan, credit card and other asset-backed VIEs in which the Corporation held a variable interest at September 30, 2016 and December 31, 2015.

## Home Equity Loan, Credit Card and Other Asset-backed VIEs

(Dollars in millions)	Home Equity Loan <sup>(1)</sup>		Credit Card <sup>(2, 3)</sup>		Resecuritization Trusts		Municipal Bond Trusts		Automobile and Other Securitization Trusts	
	September 2016	December 2015	September 2016	December 2015	September 2016	December 2015	September 2016	December 2015	September 2016	December 2015
Unconsolidated VIEs										
Maximum loss exposure	\$3,338	\$ 3,988	\$—	\$—	\$10,200	\$13,046	\$1,760	\$ 1,572	\$ 49	\$ 63
On-balance sheet assets										
Senior securities held <sup>(4, 5)</sup> :										
Trading account assets	\$—	\$—	\$—	\$—	\$670	\$ 1,248	\$26	\$ 2	\$—	\$—
Debt securities carried at fair value	48	57	—	—	2,585	4,341	—	—	49	53
Held-to-maturity securities	—	—	—	—	6,820	7,370	—	—	—	—
Subordinate securities held <sup>(4, 5)</sup> :										
Trading account assets	—	—	—	—	55	17	—	—	—	—
Debt securities carried at fair value	—	—	—	—	71	70	—	—	—	—
All other assets	—	—	—	—	—	—	—	—	—	10
Total retained positions	\$48	\$ 57	\$—	\$—	\$10,201	\$13,046	\$26	\$ 2	\$49	\$ 63
Total assets of VIEs <sup>(6)</sup>	\$4,999	\$ 5,883	\$—	\$—	\$24,489	\$35,362	\$2,626	\$ 2,518	\$ 179	\$ 314
Consolidated VIEs										
Maximum loss exposure	\$163	\$ 231	\$25,101	\$32,678	\$180	\$ 354	\$1,770	\$ 1,973	\$—	\$—
On-balance sheet assets										
Trading account assets	\$—	\$—	\$—	\$—	\$456	\$ 771	\$1,797	\$ 1,984	\$—	\$—
Loans and leases	263	321	34,872	43,194	—	—	—	—	—	—
Allowance for loan and lease losses	(16)	(18)	(1,060)	(1,293)	—	—	—	—	—	—
All other assets	6	20	283	342	—	—	—	1	—	—
Total assets	\$253	\$ 323	\$34,095	\$42,243	\$456	\$ 771	\$1,797	\$ 1,985	\$—	\$—
On-balance sheet liabilities										
Short-term borrowings	\$—	\$—	\$—	\$—	\$—	\$—	\$546	\$ 681	\$—	\$—
Long-term debt	123	183	8,977	9,550	276	417	12	12	—	—
All other liabilities	—	—	17	15	—	—	15	—	—	—
Total liabilities	\$123	\$ 183	\$8,994	\$9,565	\$276	\$ 417	\$573	\$ 693	\$—	\$—

<sup>(1)</sup> For unconsolidated home equity loan VIEs, the maximum loss exposure includes outstanding trust certificates issued by trusts in rapid amortization, net of recorded reserves. For both consolidated and unconsolidated home equity loan VIEs, the maximum loss exposure excludes the liability for representations and warranties obligations

and corporate guarantees. For additional information, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees.

- (2) At September 30, 2016 and December 31, 2015, loans and leases in the consolidated credit card trust included \$17.3 billion and \$24.7 billion of seller's interest.
- (3) At September 30, 2016 and December 31, 2015, all other assets in the consolidated credit card trust included restricted cash, certain short-term investments, and unbilled accrued interest and fees.  
As a holder of these securities, the Corporation receives scheduled principal and interest payments. During the
- (4) three and nine months ended September 30, 2016 and 2015, there were no OTTI losses recorded on those securities classified as AFS or HTM debt securities.
- (5) The retained senior and subordinate securities were valued using quoted market prices or observable market inputs (Level 2 of the fair value hierarchy).
- (6) Total assets include loans the Corporation transferred with which the Corporation has continuing involvement, which may include servicing the loan.

### Home Equity Loans

The Corporation retains interests in home equity securitization trusts to which it transferred home equity loans. These retained interests include senior and subordinate securities and residual interests. In addition, the Corporation may be obligated to provide subordinate funding to the trusts during a rapid amortization event. The Corporation typically services the loans in the trusts. Except as described below and in Note 7 – Representations and Warranties Obligations and Corporate Guarantees, the Corporation does not provide guarantees or recourse to the securitization trusts other than standard representations and warranties. There were no securitizations of home equity loans during the three and nine months ended September 30, 2016 and 2015, and all of the home equity trusts that hold revolving home equity lines of credit have entered the rapid amortization phase.

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The maximum loss exposure in the table above includes the Corporation's obligation to provide subordinate funding to the consolidated and unconsolidated home equity loan securitizations that have entered the rapid amortization phase. During this period, cash payments from borrowers are accumulated to repay outstanding debt securities and the Corporation continues to make advances to borrowers when they draw on their lines of credit. At September 30, 2016 and December 31, 2015, home equity loan securitizations in rapid amortization for which the Corporation has a subordinate funding obligation, including both consolidated and unconsolidated trusts, had \$3.3 billion and \$4.0 billion of trust certificates outstanding. The charges that will ultimately be recorded as a result of the rapid amortization events depend on the undrawn available credit on the home equity lines, performance of the loans, the amount of subsequent draws and the timing of related cash flows. Amounts actually funded by the Corporation totaled \$1 million and \$6 million for the nine months ended September 30, 2016 and 2015.

### Credit Card Securitizations

The Corporation securitizes originated and purchased credit card loans. The Corporation's continuing involvement with the securitization trust includes servicing the receivables, retaining an undivided interest (seller's interest) in the receivables, and holding certain retained interests including senior and subordinate securities, subordinate interests in accrued interest and fees on the securitized receivables, and cash reserve accounts. The seller's interest in the trust, which is *pari passu* to the investors' interest, is classified in loans and leases.

For the nine months ended September 30, 2016 and 2015, \$750 million and \$2.3 billion of new senior debt securities were issued to third-party investors from the credit card securitization trust. There were no new senior debt securities issued to third-party investors for the three months ended September 30, 2016 and 2015.

The Corporation held subordinate securities issued by the credit card securitization trust with a notional principal amount of \$7.5 billion at both September 30, 2016 and December 31, 2015. These securities serve as a form of credit enhancement to the senior debt securities and have a stated interest rate of zero percent. There were \$121 million and \$371 million of these subordinate securities issued for the nine months ended September 30, 2016 and 2015 compared to none for the three months ended September 30, 2016 and 2015.

### Resecuritization Trusts

The Corporation transfers existing securities, typically MBS, into resecuritization vehicles at the request of customers seeking securities with specific characteristics. The Corporation may also resecuritize securities within its investment portfolio for purposes of improving liquidity and capital, and managing credit or interest rate risk. Generally, there are no significant ongoing activities performed in a resecuritization trust and no single investor has the unilateral ability to liquidate the trust.

The Corporation resecuritized \$5.6 billion and \$20.3 billion of securities during the three and nine months ended September 30, 2016 compared to \$9.1 billion and \$22.1 billion for the same periods in 2015. There were no resecuritizations of AFS debt securities during the three and nine months ended September 30, 2016 and 2015. Other securities transferred into resecuritization vehicles during the three and nine months ended September 30, 2016 and 2015 were measured at fair value with changes in fair value recorded in trading account profits or other income prior to the resecuritization and no gain or loss on sale was recorded. Resecuritization proceeds included securities with an initial fair value of \$430 million and \$2.6 billion during the three and nine months ended September 30, 2016 compared to \$3.5 billion and \$5.2 billion for the same periods in 2015. All of these securities were classified as Level 2 within the fair value hierarchy.

### Municipal Bond Trusts



The Corporation administers municipal bond trusts that hold highly-rated, long-term, fixed-rate municipal bonds. The trusts obtain financing by issuing floating-rate trust certificates that reprice on a weekly or other short-term basis to third-party investors. The Corporation may transfer assets into the trusts and may also serve as remarketing agent and/or liquidity provider for the trusts. The floating-rate investors have the right to tender the certificates at specified dates. Should the Corporation be unable to remarket the tendered certificates, it may be obligated to purchase them at par under standby liquidity facilities. The Corporation also provides credit enhancement to investors in certain municipal bond trusts whereby the Corporation guarantees the payment of interest and principal on floating-rate certificates issued by these trusts in the event of default by the issuer of the underlying municipal bond.

The Corporation's liquidity commitments to unconsolidated municipal bond trusts, including those for which the Corporation was transferor, totaled \$1.7 billion and \$1.6 billion at September 30, 2016 and December 31, 2015. The weighted-average remaining life of bonds held in the trusts at September 30, 2016 was 6.2 years. There were no material write-downs or downgrades of assets or issuers during the nine months ended September 30, 2016 and 2015.

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## Automobile and Other Securitization Trusts

The Corporation transfers automobile and other loans into securitization trusts, typically to improve liquidity or manage credit risk. At September 30, 2016 and December 31, 2015, the Corporation serviced assets or otherwise had continuing involvement with automobile and other securitization trusts with outstanding balances of \$179 million and \$314 million, including trusts collateralized by other loans of \$179 million and \$189 million, and automobile loans of \$0 and \$125 million.

## Other Variable Interest Entities

The table below summarizes select information related to other VIEs in which the Corporation held a variable interest at September 30, 2016 and December 31, 2015.

## Other VIEs

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Consolidated	Unconsolidated	Total	Consolidated	Unconsolidated	Total
Maximum loss exposure	\$6,904	\$ 17,058	\$23,962	\$6,295	\$ 12,916	\$19,211
On-balance sheet assets						
Trading account assets	\$3,063	\$ 438	\$3,501	\$2,300	\$ 366	\$2,666
Debt securities carried at fair value	—	84	84	—	126	126
Loans and leases	3,474	3,522	6,996	3,317	3,389	6,706
Allowance for loan and lease losses	(9 )	(29 )	(38 )	(9 )	(23 )	(32 )
Loans held-for-sale	209	921	1,130	284	1,025	1,309
All other assets	664	11,250	11,914	664	6,925	7,589
Total	\$7,401	\$ 16,186	\$23,587	\$6,556	\$ 11,808	\$18,364
On-balance sheet liabilities						
Long-term debt <sup>(1)</sup>	\$1,172	\$ —	\$1,172	\$3,025	\$ —	\$3,025
All other liabilities	3	2,746	2,749	5	2,697	2,702
Total	\$1,175	\$ 2,746	\$3,921	\$3,030	\$ 2,697	\$5,727
Total assets of VIEs	\$7,401	\$ 62,353	\$69,754	\$6,556	\$ 49,190	\$55,746

<sup>(1)</sup> Includes \$678 million and \$2.8 billion of long-term debt at September 30, 2016 and December 31, 2015 issued by other consolidated VIEs, which has recourse to the general credit of the Corporation.

## Customer Vehicles

Customer vehicles include credit-linked, equity-linked and commodity-linked note vehicles, repackaging vehicles, and asset acquisition vehicles, which are typically created on behalf of customers who wish to obtain market or credit exposure to a specific company, index, commodity or financial instrument. The Corporation may transfer assets to and invest in securities issued by these vehicles. The Corporation typically enters into credit, equity, interest rate, commodity or foreign currency derivatives to synthetically create or alter the investment profile of the issued securities.

The Corporation's maximum loss exposure to consolidated and unconsolidated customer vehicles totaled \$3.7 billion and \$3.9 billion at September 30, 2016 and December 31, 2015, including the notional amount of derivatives to which the Corporation is a counterparty, net of losses previously recorded, and the Corporation's investment, if any, in securities issued by the vehicles. The maximum loss exposure has not been reduced to reflect the benefit of offsetting swaps with the customers or collateral arrangements. The Corporation also had liquidity commitments, including written put options and collateral value guarantees, with certain unconsolidated vehicles of \$646 million and \$691 million at September 30, 2016 and December 31, 2015, that are included in the table above.

### Collateralized Debt Obligation Vehicles

The Corporation receives fees for structuring CDO vehicles, which hold diversified pools of fixed-income securities, typically corporate debt or ABS, which the CDO vehicles fund by issuing multiple tranches of debt and equity securities. Synthetic CDOs enter into a portfolio of CDS to synthetically create exposure to fixed-income securities. CLOs, which are a subset of CDOs, hold pools of loans, typically corporate loans. CDOs are typically managed by third-party portfolio managers. The Corporation typically transfers assets to these CDOs, holds securities issued by the CDOs and may be a derivative counterparty to the CDOs, including a CDS counterparty for synthetic CDOs. The Corporation has also entered into total return swaps with certain CDOs whereby the Corporation absorbs the economic returns generated by specified assets held by the CDO.

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The Corporation's maximum loss exposure to consolidated and unconsolidated CDOs totaled \$819 million and \$543 million at September 30, 2016 and December 31, 2015. This exposure is calculated on a gross basis and does not reflect any benefit from insurance purchased from third parties.

At September 30, 2016, the Corporation had \$175 million of aggregate liquidity exposure, included in the Other VIEs table net of previously recorded losses, to unconsolidated CDOs which hold senior CDO debt securities or other debt securities on the Corporation's behalf.

### Investment Vehicles

The Corporation sponsors, invests in or provides financing, which may be in connection with the sale of assets, to a variety of investment vehicles that hold loans, real estate, debt securities or other financial instruments and are designed to provide the desired investment profile to investors or the Corporation. At September 30, 2016 and December 31, 2015, the Corporation's consolidated investment vehicles had total assets of \$970 million and \$397 million. The Corporation also held investments in unconsolidated vehicles with total assets of \$19.0 billion and \$14.7 billion at September 30, 2016 and December 31, 2015. The Corporation's maximum loss exposure associated with both consolidated and unconsolidated investment vehicles totaled \$5.8 billion and \$5.1 billion at September 30, 2016 and December 31, 2015 comprised primarily of on-balance sheet assets less non-recourse liabilities.

In prior periods, the Corporation transferred servicing advance receivables to independent third parties in connection with the sale of MSRs. Portions of the receivables were transferred into unconsolidated securitization trusts. The Corporation retained senior interests in such receivables with a maximum loss exposure and funding obligation of \$150 million and \$150 million, including a funded balance of \$84 million and \$122 million at September 30, 2016 and December 31, 2015, which were classified in other debt securities carried at fair value.

### Leveraged Lease Trusts

The Corporation's net investment in consolidated leveraged lease trusts totaled \$2.7 billion and \$2.8 billion at September 30, 2016 and December 31, 2015. The trusts hold long-lived equipment such as rail cars, power generation and distribution equipment, and commercial aircraft. The Corporation structures the trusts and holds a significant residual interest. The net investment represents the Corporation's maximum loss exposure to the trusts in the unlikely event that the leveraged lease investments become worthless. Debt issued by the leveraged lease trusts is non-recourse to the Corporation.

### Tax Credit Vehicles

The Corporation holds investments in unconsolidated limited partnerships and similar entities that construct, own and operate affordable housing, wind and solar projects. An unrelated third party is typically the general partner or managing member and has control over the significant activities of the vehicle. The Corporation earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure included in the Other VIEs table was \$10.8 billion at September 30, 2016 which includes the impact of the adoption of the new accounting guidance on determining whether limited partnerships and similar entities are VIEs. The maximum loss exposure included in this table was \$6.5 billion at December 31, 2015 and primarily relates to affordable housing. The Corporation's risk of loss is generally mitigated by policies requiring that the project qualify for the expected tax credits prior to making its investment.

The Corporation's investments in affordable housing partnerships, which are reported in other assets on the Consolidated Balance Sheet, totaled \$6.8 billion and \$7.1 billion, including unfunded commitments to provide capital contributions of \$2.2 billion and \$2.4 billion at September 30, 2016 and December 31, 2015. The unfunded

commitments are expected to be paid over the next five years. The Corporation recognized tax credits and other tax benefits from investments in affordable housing partnerships of \$337 million and \$819 million, and reported pretax losses in other noninterest income of \$200 million and \$596 million for the three and nine months ended September 30, 2016. For the same periods in 2015, the Corporation recognized tax credits and other benefits of \$239 million and \$727 million, and pretax losses of \$153 million and \$508 million. Tax credits are recognized as part of the Corporation's annual effective tax rate used to determine tax expense in a given quarter. Accordingly, the portion of a year's expected tax benefits recognized in any given quarter may differ from 25 percent. The Corporation may from time to time be asked to invest additional amounts to support a troubled affordable housing project. Such additional investments have not been and are not expected to be significant.

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### NOTE 7 – Representations and Warranties Obligations and Corporate Guarantees

#### Background

The Corporation securitizes first-lien residential mortgage loans generally in the form of RMBS guaranteed by the GSEs or by GNMA in the case of FHA-insured, VA-guaranteed and Rural Housing Service-guaranteed mortgage loans, and sells pools of first-lien residential mortgage loans in the form of whole loans. In addition, in prior years, legacy companies and certain subsidiaries sold pools of first-lien residential mortgage loans and home equity loans as private-label securitizations or in the form of whole loans. In connection with these transactions, the Corporation or certain of its subsidiaries or legacy companies made various representations and warranties. These representations and warranties, as set forth in the agreements, related to, among other things, the ownership of the loan, the validity of the lien securing the loan, the absence of delinquent taxes or liens against the property securing the loan, the process used to select the loan for inclusion in a transaction, the loan's compliance with any applicable loan criteria, including underwriting standards, and the loan's compliance with applicable federal, state and local laws. Breaches of these representations and warranties have resulted in and may continue to result in the requirement to repurchase mortgage loans or to otherwise make whole or provide other remedies to investors, guarantors, insurers or other parties (collectively, repurchases).

The liability for representations and warranties exposures and the corresponding estimated range of possible loss are based upon currently available information, significant judgment, and a number of factors and assumptions, including those discussed in Liability for Representations and Warranties and Corporate Guarantees and Estimated Range of Possible Loss in this Note, that are subject to change. Changes to any one of these factors could significantly impact the liability for representations and warranties exposures and the corresponding estimated range of possible loss and could have a material adverse impact on the Corporation's results of operations for any particular period.

#### Settlement Actions

The Corporation has vigorously contested any request for repurchase where it has concluded that a valid basis for repurchase does not exist and will continue to do so in the future. However, in an effort to resolve legacy mortgage-related issues, the Corporation has reached bulk settlements, certain of which have been for significant amounts, in lieu of a loan-by-loan review process, including settlements with the GSEs, four monoline insurers and Bank of New York Mellon (BNY Mellon), as trustee for certain securitization trusts. These bulk settlements generally did not cover all transactions with the relevant counterparties or all potential claims that may arise, including in some instances securities law, fraud, indemnification and servicing claims, which may be addressed separately. The Corporation's liability in connection with the transactions and claims not covered by these settlements could be material to the Corporation's results of operations or liquidity for any particular reporting period. The Corporation may reach other settlements in the future if opportunities arise on terms it believes to be advantageous. However, there can be no assurance that the Corporation will reach future settlements or, if it does, that the terms of past settlements can be relied upon to predict the terms of future settlements.

#### Unresolved Repurchase Claims

Unresolved representations and warranties repurchase claims represent the notional amount of repurchase claims made by counterparties, typically the outstanding principal balance or the unpaid principal balance at the time of default. In the case of first-lien mortgages, the claim amount is often significantly greater than the expected loss amount due to the benefit of collateral and, in some cases, mortgage insurance (MI) or mortgage guarantee payments. Claims received from a counterparty remain outstanding until the underlying loan is repurchased, the claim is rescinded by the counterparty, the Corporation determines that the applicable statute of limitations has expired, or representations and warranties claims with respect to the applicable trust are settled, and fully and finally released.

The Corporation does not include duplicate claims in the amounts disclosed.

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The table below presents unresolved repurchase claims at September 30, 2016 and December 31, 2015. The unresolved repurchase claims include only claims where the Corporation believes that the counterparty has the contractual right to submit claims. The unresolved repurchase claims predominantly relate to subprime and pay option first-lien loans, and home equity loans. For additional information, see Private-label Securitizations and Whole-loan Sales Experience in this Note and Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## Unresolved Repurchase Claims by Counterparty, net of duplicate claims

(Dollars in millions)	September 30 2016	December 31 2015
By counterparty		
Private-label securitization trustees, whole-loan investors, including third-party securitization sponsors and other <sup>(1)</sup>	\$ 16,713	\$ 16,748
Monolines	1,590	1,599
GSEs	9	17
Total unresolved repurchase claims by counterparty, net of duplicate claims	\$ 18,312	\$ 18,364

<sup>(1)</sup> Includes \$11.9 billion of claims based on individual file reviews and \$4.8 billion of claims submitted without individual file reviews at both September 30, 2016 and December 31, 2015.

During the three and nine months ended September 30, 2016, the Corporation received \$20 million and \$614 million in new repurchase claims, including zero and \$440 million that are deemed time-barred. During the three and nine months ended September 30, 2016, \$27 million and \$666 million in claims were resolved, including zero and \$477 million that are deemed time-barred. Of the remaining unresolved monoline claims, substantially all of the claims pertain to second-lien loans and are currently the subject of litigation with a single monoline insurer. There may be additional claims or file requests in the future.

In addition to the unresolved repurchase claims in the Unresolved Repurchase Claims by Counterparty, net of duplicate claims table, the Corporation has received notifications from sponsors of third-party securitizations with whom the Corporation engaged in whole-loan transactions indicating that the Corporation may have indemnity obligations with respect to loans for which the Corporation has not received a repurchase request. These outstanding notifications totaled \$1.3 billion and \$1.4 billion at September 30, 2016 and December 31, 2015.

The presence of repurchase claims on a given trust, receipt of notices of indemnification obligations and receipt of other communications, as discussed above, are among the factors that inform the Corporation's liability for representations and warranties and the corresponding estimated range of possible loss.

## Private-label Securitizations and Whole-loan Sales Experience

Prior to 2009, legacy companies and certain subsidiaries sold pools of first-lien residential mortgage loans and home equity loans as private-label securitizations or in the form of whole loans. In connection with these transactions, the Corporation or certain of its subsidiaries or legacy companies made various representations and warranties. When the Corporation provided representations and warranties in connection with the sale of whole loans, the whole-loan investors may retain the right to make repurchase claims even when the loans were aggregated with other collateral into private-label securitizations sponsored by the whole-loan investors. In other third-party securitizations, the whole-loan investors' rights to enforce the representations and warranties were transferred to the securitization trustees. Private-label securitization investors generally do not have the contractual right to demand repurchase of loans directly or the right to access loan files directly.





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At both September 30, 2016 and December 31, 2015, for loans originated between 2004 and 2008, the notional amount of unresolved repurchase claims submitted by private-label securitization trustees, whole-loan investors, including third-party securitization sponsors, and others was \$16.7 billion. The notional amount of unresolved repurchase claims at both September 30, 2016 and December 31, 2015 included \$3.5 billion of claims related to loans in specific private-label securitization groups or tranches where the Corporation owns substantially all of the outstanding securities.

The notional amount of outstanding unresolved repurchase claims remained relatively unchanged for the nine months ended September 30, 2016 compared to December 31, 2015. Outstanding repurchase claims remained unresolved primarily due to (1) the level of detail, support and analysis accompanying such claims, which impact overall claim quality and, therefore, claims resolution, and (2) the lack of an established process to resolve disputes related to these claims.

The Corporation reviews properly presented repurchase claims on a loan-by-loan basis. For time-barred claims, the counterparty is informed that the claim is denied on the basis of the statute of limitations and the claim is treated as resolved. For timely claims, if the Corporation, after review, does not believe a claim is valid, it will deny the claim and generally indicate a reason for the denial. If the counterparty agrees with the Corporation's denial of the claim, the counterparty may rescind the claim. If there is disagreement as to the resolution of the claim, meaningful dialogue and negotiation between the parties are generally necessary to reach a resolution on an individual claim. When a claim is denied and the Corporation does not hear from the counterparty for six months, the Corporation views the claim as inactive; however, such claims remain in the outstanding claims balance until resolution. In the case of private-label securitization trustees and third-party sponsors, there is currently no established process in place for the parties to reach a conclusion on an individual loan if there is a disagreement on the resolution of the claim. The Corporation has performed an initial review with respect to substantially all outstanding claims and, although the Corporation does not believe a valid basis for repurchase has been established by the claimant, it considers such claims activity in the computation of its liability for representations and warranties.

#### Liability for Representations and Warranties and Corporate Guarantees and Estimated Range of Possible Loss

The liability for representations and warranties and corporate guarantees is included in accrued expenses and other liabilities on the Consolidated Balance Sheet and the related provision is included in mortgage banking income in the Consolidated Statement of Income. The liability for representations and warranties is established when those obligations are both probable and reasonably estimable.

The Corporation's representations and warranties liability and the corresponding estimated range of possible loss at September 30, 2016 considers, among other things, the repurchase experience implied in the settlement with BNY Mellon. Since the securitization trusts that were included in the settlement with BNY Mellon differ from other securitization trusts where the possibility of timely claims exists, the Corporation adjusted the repurchase experience implied in the settlement in order to determine the representations and warranties liability and the corresponding estimated range of possible loss.

The table below presents a rollforward of the liability for representations and warranties and corporate guarantees.

#### Representations and Warranties and Corporate Guarantees

(Dollars in millions)	Three Months		Nine Months	
	Ended September 30		Ended September 30	
	2016	2015	2016	2015
	\$2,723	\$11,556	\$11,326	\$12,081

Liability for representations and warranties and corporate guarantees, beginning of period				
Additions for new sales	1	2	3	5
Net reductions	(23 )	(174 )	(8,687 )	(581 )
Provision (benefit)	99	75	158	(46 )
Liability for representations and warranties and corporate guarantees, September 30 <sup>(1)</sup>	\$2,800	\$11,459	\$2,800	\$11,459

<sup>(1)</sup> In February 2016, the Corporation made an \$8.5 billion cash payment as part of the settlement with BNY Mellon.

The representations and warranties liability represents the Corporation's best estimate of probable incurred losses as of September 30, 2016. However, it is reasonably possible that future representations and warranties losses may occur in excess of the amounts recorded for these exposures.

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The Corporation currently estimates that the range of possible loss for representations and warranties exposures could be up to \$2 billion over existing accruals at September 30, 2016. The Corporation treats claims that are time-barred as resolved and does not consider such claims in the estimated range of possible loss. The estimated range of possible loss reflects principally exposures related to loans in private-label securitization trusts. It represents a reasonably possible loss, but does not represent a probable loss, and is based on currently available information, significant judgment and a number of assumptions that are subject to change.

The liability for representations and warranties exposures and the corresponding estimated range of possible loss do not consider certain losses related to servicing, including foreclosure and related costs, fraud, indemnity, or claims (including for RMBS) related to securities law or monoline insurance litigation. Losses with respect to one or more of these matters could be material to the Corporation's results of operations or liquidity for any particular reporting period.

Future provisions and/or ranges of possible loss for representations and warranties may be significantly impacted if actual experiences are different from the Corporation's assumptions in predictive models, including, without limitation, the actual repurchase rates on loans in trusts not settled as part of the settlement with BNY Mellon which may be different than the implied repurchase experience, estimated MI rescission rates, economic conditions, estimated home prices, consumer and counterparty behavior, the applicable statute of limitations, potential indemnity obligations to third parties to whom the Corporation has sold loans subject to representations and warranties and a variety of other judgmental factors. Adverse developments with respect to one or more of the assumptions underlying the liability for representations and warranties and the corresponding estimated range of possible loss could result in significant increases to future provisions and/or the estimated range of possible loss.

For more information on the settlement with BNY Mellon, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## NOTE 8 – Goodwill and Intangible Assets

## Goodwill

The table below presents goodwill balances by business segment and All Other at September 30, 2016 and December 31, 2015. The reporting units utilized for goodwill impairment testing are the operating segments or one level below. For more information, see Note 8 – Goodwill and Intangible Assets to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## Goodwill

(Dollars in millions)	September 30	December 31
	2016	2015
Consumer Banking	\$ 30,123	\$ 30,123
Global Wealth & Investment Management	9,681	9,698
Global Banking	23,923	23,923
Global Markets	5,197	5,197
All Other	820	820
Total goodwill	\$ 69,744	\$ 69,761

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## Intangible Assets

The table below presents the gross and net carrying values and accumulated amortization for intangible assets at September 30, 2016 and December 31, 2015.

Intangible Assets <sup>(1, 2)</sup>

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Purchased credit card and affinity relationships	\$6,876	\$ 6,213	\$ 663	\$7,006	\$ 6,111	\$ 895
Core deposit and other intangibles <sup>(3)</sup>	3,837	2,023	1,814	3,922	1,986	1,936
Customer relationships	3,887	3,196	691	3,927	2,990	937
Total intangible assets	\$14,600	\$ 11,432	\$ 3,168	\$14,855	\$ 11,087	\$ 3,768

<sup>(1)</sup> Excludes fully amortized intangible assets.

<sup>(2)</sup> At September 30, 2016 and December 31, 2015, none of the intangible assets were impaired.

<sup>(3)</sup> Includes intangible assets of \$1.6 billion at both September 30, 2016 and December 31, 2015 associated with trade names that have an indefinite life and, accordingly, are not amortized.

Amortization of intangibles expense was \$181 million and \$554 million for the three and nine months ended September 30, 2016, compared to \$207 million and \$632 million for the same periods in 2015. The Corporation estimates aggregate amortization expense will be \$179 million for the fourth quarter of 2016, and \$638 million, \$559 million, \$118 million, \$57 million and \$3 million for the years ended 2017, 2018, 2019, 2020 and 2021.

## NOTE 9 – Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings

The table below presents federal funds sold or purchased, securities financing agreements, which include securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase, and short-term borrowings. The Corporation elects to account for certain securities financing agreements and short-term borrowings under the fair value option. For more information on the election of the fair value option, see Note 15 – Fair Value Option.

(Dollars in millions)	Three Months Ended September 30				Nine Months Ended September 30			
	Amount		Rate		Amount		Rate	
Average during period	2016	2015	2016	2015	2016	2015	2016	2015
Federal funds sold and securities borrowed or purchased under agreements to resell	\$214,254	\$210,127	0.50%	0.52%	\$215,476	\$212,781	0.50%	0.49%
Federal funds purchased and securities loaned or sold under agreements to repurchase	\$177,883	\$219,613	0.93%	0.83%	\$184,500	\$218,112	1.00%	0.92%
Short-term borrowings	29,751	37,710	2.02	1.44	30,631	33,119	1.85	1.47
Total	\$207,634	\$257,323	1.09	0.92	\$215,131	\$251,231	1.12	0.99

## Maximum month-end balance during period

Federal funds sold and securities borrowed or purchased under agreements to resell	\$222,489	\$217,701		\$225,015	\$226,502
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Federal funds purchased and securities loaned or sold under agreements to repurchase	\$192,536	\$235,232	\$196,631	\$235,232
Short-term borrowings	31,935	40,110	33,051	40,110

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## Offsetting of Securities Financing Agreements

Substantially all of the Corporation's securities financing activities are transacted under legally enforceable master repurchase agreements or legally enforceable master securities lending agreements that give the Corporation, in the event of default by the counterparty, the right to liquidate securities held and to offset receivables and payables with the same counterparty. The Corporation offsets securities financing transactions with the same counterparty on the Consolidated Balance Sheet where it has such a legally enforceable master netting agreement and the transactions have the same maturity date.

The Securities Financing Agreements table presents securities financing agreements included on the Consolidated Balance Sheet in federal funds sold and securities borrowed or purchased under agreements to resell, and in federal funds purchased and securities loaned or sold under agreements to repurchase at September 30, 2016 and December 31, 2015. Balances are presented on a gross basis, prior to the application of counterparty netting. Gross assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements. For more information on the offsetting of derivatives, see Note 2 – Derivatives.

The "Other" amount in the table, which is included on the Consolidated Balance Sheet in accrued expenses and other liabilities, relates to transactions where the Corporation acts as the lender in a securities lending agreement and receives securities that can be pledged as collateral or sold. In these transactions, the Corporation recognizes an asset at fair value, representing the securities received, and a liability, representing the obligation to return those securities.

Gross assets and liabilities in the table include activity where uncertainty exists as to the enforceability of certain master netting agreements under bankruptcy laws in some countries or industries and, accordingly, these are reported on a gross basis.

The column titled "Financial Instruments" in the table includes securities collateral received or pledged under repurchase or securities lending agreements where there is a legally enforceable master netting agreement. These amounts are not offset on the Consolidated Balance Sheet, but are shown as a reduction to the net balance sheet amount in this table to derive a net asset or liability. Securities collateral received or pledged where the legal enforceability of the master netting agreements is not certain is not included.

## Securities Financing Agreements

(Dollars in millions)	September 30, 2016		Net Balance Sheet Amount	Financial Instruments	Net Assets/Liabilities
	Gross Assets/Liabilities	Amounts Offset			
Securities borrowed or purchased under agreements to resell <sup>(1)</sup>	\$361,474	\$(142,664)	\$218,810	\$(168,580)	\$ 50,230
Securities loaned or sold under agreements to repurchase	\$320,847	\$(142,664)	\$178,183	\$(148,316)	\$ 29,867
Other	15,588	—	15,588	(15,588)	—
Total	\$336,435	\$(142,664)	\$193,771	\$(163,904)	\$ 29,867
	December 31, 2015				
Securities borrowed or purchased under agreements to resell <sup>(1)</sup>	\$347,281	\$(154,799)	\$192,482	\$(144,332)	\$ 48,150

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Securities loaned or sold under agreements to repurchase	\$329,078	\$(154,799)	\$174,279	\$(135,737)	\$ 38,542
Other	13,235	—	13,235	(13,235)	—
Total	\$342,313	\$(154,799)	\$187,514	\$(148,972)	\$ 38,542

(1) Excludes repurchase activity of \$11.3 billion and \$9.3 billion reported in loans and leases on the Consolidated Balance Sheet at September 30, 2016 and December 31, 2015.



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## Repurchase Agreements and Securities Loaned Transactions Accounted for as Secured Borrowings

The tables below present securities sold under agreements to repurchase and securities loaned by remaining contractual term to maturity and class of collateral pledged. Included in "Other" are transactions where the Corporation acts as the lender in a securities lending agreement and receives securities that can be pledged as collateral or sold. Certain agreements contain a right to substitute collateral and/or terminate the agreement prior to maturity at the option of the Corporation or the counterparty. Such agreements are included in the table below based on the remaining contractual term to maturity. At September 30, 2016 and December 31, 2015, the Corporation had no outstanding repurchase-to-maturity transactions.

## Remaining Contractual Maturity

(Dollars in millions)	September 30, 2016				Total
	Overnight and Continuous	30 Days or Less	After 30 Days Through 90 Days	Greater than 90 Days <sup>(1)</sup>	
Securities sold under agreements to repurchase	\$143,277	\$72,784	\$43,945	\$40,385	\$300,391
Securities loaned	15,372	1,458	1,804	1,822	20,456
Other	15,588	—	—	—	15,588
Total	\$174,237	\$74,242	\$45,749	\$42,207	\$336,435
	December 31, 2015				
Securities sold under agreements to repurchase	\$126,694	\$86,879	\$43,216	\$27,514	\$284,303
Securities loaned	39,772	363	2,352	2,288	44,775
Other	13,235	—	—	—	13,235
Total	\$179,701	\$87,242	\$45,568	\$29,802	\$342,313

<sup>(1)</sup> No agreements have maturities greater than three years.

## Class of Collateral Pledged

(Dollars in millions)	September 30, 2016			
	Securities Sold Under Agreements to Repurchase	Securities loaned	Other	Total
U.S. government and agency securities	\$177,348	\$—	\$137	\$177,485
Corporate securities, trading loans and other	8,724	1,475	326	10,525
Equity securities	20,517	11,261	15,089	46,867
Non-U.S. sovereign debt	85,885	7,720	36	93,641
Mortgage trading loans and ABS	7,917	—	—	7,917
Total	\$300,391	\$20,456	\$15,588	\$336,435
	December 31, 2015			
U.S. government and agency securities	\$142,572	\$—	\$27	\$142,599
Corporate securities, trading loans and other	11,767	265	278	12,310
Equity securities	32,323	13,350	12,929	58,602
Non-U.S. sovereign debt	87,849	31,160	1	119,010
Mortgage trading loans and ABS	9,792	—	—	9,792

Total	\$284,303	\$44,775	\$13,235	\$342,313
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The Corporation is required to post collateral with a market value equal to or in excess of the principal amount borrowed under repurchase agreements. For securities loaned transactions, the Corporation receives collateral in the form of cash, letters of credit or other securities. To ensure that the market value of the underlying collateral remains sufficient, collateral is generally valued daily and the Corporation may be required to deposit additional collateral or may receive or return collateral pledged when appropriate. Repurchase agreements and securities loaned transactions are generally either overnight, continuous (i.e., no stated term) or short-term. The Corporation manages liquidity risks related to these agreements by sourcing funding from a diverse group of counterparties, providing a range of securities collateral and pursuing longer durations, when appropriate.

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Letters of credit	1,650	165	258	54	2,127
Legally binding commitments	113,192	147,778	167,689	58,081	486,740
Credit card lines <sup>(2)</sup>	370,127	—	—	—	370,127
Total credit extension commitments	\$483,319	\$147,778	\$167,689	\$58,081	\$856,867

The notional amounts of SBLCs and financial guarantees classified as investment grade and non-investment grade based on the credit quality of the underlying reference name within the instrument were \$26.3 billion and \$8.3 billion at September 30, 2016, and \$25.5 billion and \$8.4 billion at December 31, 2015. Amounts in the table include consumer SBLCs of \$129 million and \$164 million at September 30, 2016 and December 31, 2015.

<sup>(2)</sup> Includes business card unused lines of credit.

Legally binding commitments to extend credit generally have specified rates and maturities. Certain of these commitments have adverse change clauses that help to protect the Corporation against deterioration in the borrower's ability to pay.

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### Other Commitments

At September 30, 2016 and December 31, 2015, the Corporation had commitments to purchase loans (e.g., residential mortgage and commercial real estate) of \$902 million and \$729 million, and commitments to purchase commercial loans of \$630 million and \$874 million, which upon settlement will be included in loans or LHFS.

At both September 30, 2016 and December 31, 2015, the Corporation had commitments to purchase commodities, primarily liquefied natural gas of \$1.9 billion, which upon settlement will be included in trading account assets.

At September 30, 2016 and December 31, 2015, the Corporation had commitments to enter into resale and forward-dated resale and securities borrowing agreements of \$50.0 billion and \$88.6 billion, and commitments to enter into forward-dated repurchase and securities lending agreements of \$28.6 billion and \$53.7 billion. These commitments expire within the next 12 months.

The Corporation has entered into agreements to purchase retail automotive loans from certain auto loan originators. These agreements provide for stated purchase amounts and contain cancellation provisions that allow the Corporation to terminate its commitment to purchase at any time, with a minimum notification period. At September 30, 2016 and December 31, 2015, the Corporation's maximum purchase commitment was \$1.8 billion and \$1.2 billion. In addition, the Corporation has a commitment to originate or purchase auto loans and leases from a strategic partner of \$620 million over the remainder of 2016, and \$2.4 billion in 2017. This commitment expires on December 31, 2017.

The Corporation is a party to operating leases for certain of its premises and equipment. Commitments under these leases are approximately \$604 million, \$2.3 billion, \$2.0 billion, \$1.7 billion and \$1.5 billion for the remainder of 2016 and the years through 2020, respectively, and \$5.4 billion in the aggregate for all years thereafter.

### Other Guarantees

#### Bank-owned Life Insurance Book Value Protection

The Corporation sells products that offer book value protection to insurance carriers who offer group life insurance policies to corporations, primarily banks. The book value protection is provided on portfolios of intermediate investment-grade fixed-income securities and is intended to cover any shortfall in the event that policyholders surrender their policies and market value is below book value. These guarantees are recorded as derivatives and carried at fair value in the trading portfolio. At September 30, 2016 and December 31, 2015, the notional amount of these guarantees totaled \$13.9 billion and \$13.8 billion, and the Corporation's maximum exposure related to these guarantees totaled \$3.2 billion and \$3.1 billion, with estimated maturity dates between 2031 and 2039. The net fair value including the fee receivable associated with these guarantees was \$6 million and \$12 million at September 30, 2016 and December 31, 2015, and reflects the probability of surrender as well as the multiple structural protection features in the contracts.

### Merchant Services

In accordance with credit and debit card association rules, the Corporation sponsors merchant processing services that process credit and debit card transactions on behalf of various merchants. In connection with these services, a liability may arise in the event of a billing dispute between the merchant and a cardholder that is ultimately resolved in the cardholder's favor. If the merchant defaults on its obligation to reimburse the cardholder, the cardholder, through its issuing bank, generally has until six months after the date of the transaction to present a chargeback to the merchant processor, which is primarily liable for any losses on covered transactions. However, if the merchant processor fails to meet its obligation to reimburse the cardholder for disputed transactions, then the Corporation, as the sponsor, could

be held liable for the disputed amount. For the three and nine months ended September 30, 2016, the sponsored entities processed and settled \$189.9 billion and \$527.7 billion of transactions and recorded losses of \$9 million and \$23 million. For the three and nine months ended September 30, 2015, the sponsored entities processed and settled \$168.6 billion and \$494.2 billion of transactions and recorded losses of \$6 million and \$16 million. A significant portion of this activity was processed by a joint venture in which the Corporation holds a 49 percent ownership. At September 30, 2016 and December 31, 2015, the sponsored merchant processing servicers held as collateral \$175 million and \$181 million of merchant escrow deposits which may be used to offset amounts due from the individual merchants.

The Corporation believes the maximum potential exposure for chargebacks would not exceed the total amount of merchant transactions processed through Visa and MasterCard for the last six months, which represents the claim period for the cardholder, plus any outstanding delayed-delivery transactions. As of September 30, 2016 and December 31, 2015, the maximum potential exposure for sponsored transactions totaled \$302.1 billion and \$277.1 billion. However, the Corporation believes that the maximum potential exposure is not representative of the actual potential loss exposure and does not expect to make material payments in connection with these guarantees.

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### Other Guarantees

The Corporation has entered into additional guarantee agreements and commitments, including sold risk participation swaps, liquidity facilities, lease-end obligation agreements, partial credit guarantees on certain leases, real estate joint venture guarantees, divested business commitments and sold put options that require gross settlement. The maximum potential future payment under these agreements was approximately \$6.5 billion and \$6.0 billion at September 30, 2016 and December 31, 2015. The estimated maturity dates of these obligations extend up to 2040. The Corporation has made no material payments under these guarantees.

In the normal course of business, the Corporation periodically guarantees the obligations of its affiliates in a variety of transactions including ISDA-related transactions and non-ISDA related transactions such as commodities trading, repurchase agreements, prime brokerage agreements and other transactions.

### Other Contingencies

#### Payment Protection Insurance Claims Matter

In the U.K., the Corporation previously sold payment protection insurance (PPI) through its international card services business to credit card customers and consumer loan customers. PPI covers a consumer's loan or debt repayment if certain events occur such as loss of job or illness. In response to an elevated level of customer complaints across the industry, heightened media coverage and pressure from consumer advocacy groups, the Prudential Regulation Authority and the Financial Conduct Authority (FCA) investigated and raised concerns about the way some companies have handled complaints related to the sale of these insurance policies. In August 2016, the FCA issued a further consultation paper on the treatment of certain PPI claims and expects to finalize guidance by the end of the year.

The reserve for PPI claims was \$165 million and \$360 million at September 30, 2016 and December 31, 2015. The Corporation recorded no expense and \$13 million for the three and nine months ended September 30, 2016 compared to \$303 million and \$319 million for the same periods in 2015. It is possible that the Corporation will incur additional expense related to PPI claims; however, the amount of such additional expense cannot be reasonably estimated.

### FDIC

Beginning in the third quarter of 2016, the FDIC implemented a surcharge of 4.5 cents per \$100 of their assessment base, after making certain adjustments, on insured depository institutions with total assets of \$10 billion or more. The FDIC expects the surcharge to be in effect for approximately two years. If the Deposit Insurance Fund (DIF) reserve ratio does not reach 1.35 percent by December 31, 2018, the FDIC will impose a shortfall assessment on any bank subject to the surcharge. The surcharge increased the Corporation's deposit insurance assessment for the three months ended September 30, 2016 by approximately \$100 million, and the Corporation expects that amount of expense related to the surcharge in future quarters. The FDIC has also adopted regulations that establish a long-term target DIF ratio of greater than two percent, which would be expected to impose additional deposit insurance costs on the Corporation. Deposit insurance assessment rates are subject to change by the FDIC, and can be impacted by the overall economy, the stability of the banking industry as a whole, and regulations or regulatory interpretations.

### Litigation and Regulatory Matters

The following supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K and in Note 10 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's Quarterly Report on Form 10-Q for the quarterly

periods ended June 30, 2016 and March 31, 2016 (the prior commitments and contingencies disclosure).

In the ordinary course of business, the Corporation and its subsidiaries are routinely defendants in or parties to many pending and threatened legal, regulatory and governmental actions and proceedings. In view of the inherent difficulty of predicting the outcome of such matters, particularly where the claimants seek very large or indeterminate damages or where the matters present novel legal theories or involve a large number of parties, the Corporation generally cannot predict what the eventual outcome of the matters will be, what the timing of the ultimate resolution of these matters will be, or what the expense, eventual loss, fines or penalties related to each matter may be.



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In accordance with applicable accounting guidance, the Corporation establishes an accrued liability when those matters present loss contingencies that are both probable and estimable. In such cases, there may be an exposure to loss in excess of any amounts accrued. As a matter develops, the Corporation, in conjunction with any outside counsel handling the matter, evaluates on an ongoing basis whether such matter presents a loss contingency that is probable and estimable. Once the loss contingency is deemed to be both probable and estimable, the Corporation will establish an accrued liability and record a corresponding amount of litigation-related expense. The Corporation continues to monitor the matter for further developments that could affect the amount of the accrued liability that has been previously established. Excluding expenses of internal and external legal service providers, litigation-related expense of \$250 million and \$908 million was recognized for the three and nine months ended September 30, 2016 compared to \$231 million and \$776 million for the same periods in 2015.

For a limited number of the matters disclosed in this Note, and in the prior commitments and contingencies disclosure, for which a loss, whether in excess of a related accrued liability or where there is no accrued liability, is reasonably possible in future periods, the Corporation is able to estimate a range of possible loss. In determining whether it is possible to estimate a range of possible loss, the Corporation reviews and evaluates its matters on an ongoing basis, in conjunction with any outside counsel handling the matter, in light of potentially relevant factual and legal developments. In cases in which the Corporation possesses sufficient appropriate information to estimate a range of possible loss, that estimate is aggregated and disclosed below. There may be other disclosed matters for which a loss is probable or reasonably possible but such an estimate of the range of possible loss may not be possible. For those matters where an estimate of the range of possible loss is possible, management currently estimates the aggregate range of possible loss is \$0 to \$1.1 billion in excess of the accrued liability (if any) related to those matters. This estimated range of possible loss is based upon currently available information and is subject to significant judgment and a variety of assumptions, and known and unknown uncertainties. The matters underlying the estimated range will change from time to time, and actual results may vary significantly from the current estimate. Therefore, this estimated range of possible loss represents what the Corporation believes to be an estimate of possible loss only for certain matters meeting these criteria. It does not represent the Corporation's maximum loss exposure.

Information is provided below, or in the prior commitments and contingencies disclosure, regarding the nature of all of these contingencies and, where specified, the amount of the claim associated with these loss contingencies. Based on current knowledge, management does not believe that loss contingencies arising from pending matters, including the matters described herein and in the prior commitments and contingencies disclosure, will have a material adverse effect on the consolidated financial position or liquidity of the Corporation. However, in light of the inherent uncertainties involved in these matters, some of which are beyond the Corporation's control, and the very large or indeterminate damages sought in some of these matters, an adverse outcome in one or more of these matters could be material to the Corporation's results of operations or liquidity for any particular reporting period.

### Bond Insurance Litigation

#### Ambac Countrywide Litigation

On October 11, 2016, the Wisconsin Supreme Court granted Countrywide's petition in *The Segregated Account of Ambac Assurance Corporation and Ambac Assurance Corporation v. Countrywide Home Loans, Inc.*, for review of the decision of the Court of Appeals of Wisconsin, District IV, which reversed the lower court's dismissal of the action for lack of personal jurisdiction.

### LIBOR, Other Reference Rate and Foreign Exchange (FX) Inquiries and Litigation

On October 20, 2016, the defendants in the LIBOR litigation filed a petition for a writ of certiorari to the U.S. Supreme Court to review the Second Circuit's holding regarding the antitrust claims dismissed by the district court.

O'Donnell Litigation

On August 22, 2016, the Second Circuit denied the Government's petition for rehearing. On September 2, 2016, the District Court entered judgment on remand in favor of the defendants.

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## NOTE 11 – Shareholders' Equity

## Common Stock

The table below presents the declared quarterly cash dividends on common stock in 2016 and through November 1, 2016.

Declaration Date	Record Date	Payment Date	Dividend Per Share
October 27, 2016	December 2, 2016	December 30, 2016	\$0.075
July 27, 2016	September 2, 2016	September 23, 2016	0.075
April 27, 2016	June 3, 2016	June 24, 2016	0.05
January 21, 2016	March 4, 2016	March 25, 2016	0.05

During the three months ended September 30, 2016, the Corporation repurchased and retired 93.0 million shares of common stock in connection with the 2016 Comprehensive Capital Analysis and Review (CCAR) capital plan, which reduced shareholders' equity by \$1.4 billion. This includes shares repurchased to offset the dilution resulting from certain equity-based compensation awards.

During the nine months ended September 30, 2016, in connection with employee stock plans, the Corporation issued approximately 9 million shares and repurchased approximately 4 million shares of its common stock to satisfy tax withholding obligations. At September 30, 2016, the Corporation had reserved 1.6 billion unissued shares of common stock for future issuances under employee stock plans, common stock warrants, convertible notes and preferred stock.

The Corporation has certain warrants outstanding and exercisable to purchase 150 million shares of its common stock, expiring on January 16, 2019 and warrants outstanding and exercisable to purchase 122 million shares of its common stock, expiring on October 28, 2018. These warrants are listed on the New York Stock Exchange. The exercise price of the warrants expiring on January 16, 2019 is subject to continued adjustment each time the quarterly cash dividend is in excess of \$0.01 per common share to compensate the holders of the warrants for dilution resulting from an increased dividend. As a result of the Corporation's third-quarter 2016 dividend of \$0.075 per common share, the exercise price of these warrants was adjusted to \$12.980. The warrants expiring on October 28, 2018 also contain this anti-dilution provision except the adjustment is triggered only when the Corporation declares quarterly dividends at a level greater than \$0.32 per common share.

During the three months ended March 31, 2016, June 30, 2016 and September 30, 2016, the Corporation declared \$457 million, \$361 million and \$503 million of cash dividends on preferred stock, or a total of \$1.3 billion for the nine months ended September 30, 2016.

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## NOTE 12 – Accumulated Other Comprehensive Income (Loss)

The table below presents the changes in accumulated OCI after-tax for the nine months ended September 30, 2016 and 2015.

(Dollars in millions)	Debt Securities	Available-for-sale Marketable Equity Securities	Debit Valuation Adjustments	Derivatives	Employee Benefit Plans	Foreign Currency (1)	Total
Balance, December 31, 2014	\$ 1,641	\$ 17	n/a	\$ (1,661 )	\$ (3,350 )	\$ (669 )	\$ (4,022)
Cumulative adjustment for accounting change	—	—	\$ (1,226 )	—	—	—	(1,226 )
Net change	169	(2 )	633	416	77	(84 )	1,209
Balance, September 30, 2015	\$ 1,810	\$ 15	\$ (593 )	\$ (1,245 )	\$ (3,273 )	\$ (753 )	\$ (4,039)
Balance, December 31, 2015	\$ 16	\$ 62	\$ (611 )	\$ (1,077 )	\$ (2,956 )	\$ (792 )	\$ (5,358)
Net change	3,362	(43 )	49	277	29	(17 )	3,657
Balance, September 30, 2016	\$ 3,378	\$ 19	\$ (562 )	\$ (800 )	\$ (2,927 )	\$ (809 )	\$ (1,701)

(1) The net change in fair value represents the impact of changes in spot foreign exchange rates on the Corporation's net investment in non-U.S. operations and related hedges.

n/a = not applicable

The table below presents the net change in fair value recorded in accumulated OCI, net realized gains and losses reclassified into earnings and other changes for each component of OCI before- and after-tax for the nine months ended September 30, 2016 and 2015.

## Changes in OCI Components Before- and After-tax

(Dollars in millions)	Nine Months Ended September 30, 2016		Nine Months Ended September 30, 2015		After-tax
	Before-tax	Tax effect	Before-tax	Tax effect	
<b>Debt securities:</b>					
Net change in unrealized gains	\$ 5,896	\$ (2,239)	\$ 3,657	\$ 1,089	\$ (418 ) \$ 671
Net realized gains reclassified into earnings	(476 )	181	(295 )	(809 )	307 (502 )
Net change	5,420	(2,058 )	3,362	280	(111 ) 169
<b>Available-for-sale marketable equity securities:</b>					
Net decrease in fair value	(70 )	27	(43 )	(3 )	1 (2 )
Net change	(70 )	27	(43 )	(3 )	1 (2 )
<b>Debit valuation adjustments:</b>					
Net increase in fair value	61	(23 )	38	475	(181 ) 294
Net realized losses reclassified into earnings	18	(7 )	11	545	(206 ) 339
Net change	79	(30 )	49	1,020	(387 ) 633
<b>Derivatives:</b>					
Net decrease in fair value	(64 )	23	(41 )	(42 )	14 (28 )
Net realized losses reclassified into earnings	508	(190 )	318	711	(267 ) 444
Net change	444	(167 )	277	669	(253 ) 416
<b>Employee benefit plans:</b>					
Net realized losses reclassified into earnings	64	(25 )	39	128	(49 ) 79
Settlements, curtailments and other	—	(10 )	(10 )	(2 )	— (2 )

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Net change	64	(35	)	29	126	(49	)	77		
Foreign currency:										
Net decrease in fair value	123	(140	)	(17	)	482	(566	)	(84	)
Net realized gains reclassified into earnings	—	—		—	(29	)	29	—		
Net change	123	(140	)	(17	)	453	(537	)	(84	)
Total other comprehensive income	\$6,060	\$(2,403)		\$3,657	\$2,545	\$(1,336)		\$1,209		

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The table below presents impacts on net income of significant amounts reclassified out of each component of accumulated OCI before- and after-tax for the nine months ended September 30, 2016 and 2015. There were no amounts reclassified out of AFS marketable equity securities and foreign currency for the nine months ended September 30, 2016 and 2015.

## Reclassifications Out of Accumulated OCI

(Dollars in millions)		Nine Months Ended September 30	
Accumulated OCI Components	Income Statement Line Item Impacted	2016	2015
Debt securities:			
	Gains on sales of debt securities	\$490	\$886
	Other loss	(14 )	(77 )
	Income before income taxes	476	809
	Income tax expense	181	307
	Reclassification to net income	295	502
Debit valuation adjustments:			
	Other loss	(18 )	(545 )
	Loss before income taxes	(18 )	(545 )
	Income tax benefit	(7 )	(206 )
	Reclassification to net income	(11 )	(339 )
Derivatives:			
Interest rate contracts	Net interest income	(447 )	(768 )
Equity compensation contracts	Personnel	(61 )	57
	Loss before income taxes	(508 )	(711 )
	Income tax benefit	(190 )	(267 )
	Reclassification to net income	(318 )	(444 )
Employee benefit plans:			
Net actuarial losses and prior service costs	Personnel	(64 )	(128 )
	Loss before income taxes	(64 )	(128 )
	Income tax benefit	(25 )	(49 )
	Reclassification to net income	(39 )	(79 )
Total reclassification adjustments		\$(73 )	\$(360)

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## NOTE 13 – Earnings Per Common Share

The calculation of earnings per common share (EPS) and diluted EPS for the three and nine months ended September 30, 2016 and 2015 is presented below. For more information on the calculation of EPS, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

	Three Months Ended September 30		Nine Months Ended September 30	
	2016	2015	2016	2015
(Dollars in millions, except per share information; shares in thousands)				
Earnings per common share				
Net income	\$4,955	\$ 4,619	\$13,210	\$ 12,552
Preferred stock dividends	(503 )	(441 )	(1,321 )	(1,153 )
Net income applicable to common shareholders	\$4,452	\$ 4,178	\$11,889	\$ 11,399
Average common shares issued and outstanding	10,250,120	10,444,291	10,312,878	10,483,466
Earnings per common share	\$0.43	\$ 0.40	\$1.15	\$ 1.09
Diluted earnings per common share				
Net income applicable to common shareholders	\$4,452	\$ 4,178	\$11,889	\$ 11,399
Add preferred stock dividends due to assumed conversions	75	75	225	225
Net income allocated to common shareholders	\$4,527	\$ 4,253	\$12,114	\$ 11,624
Average common shares issued and outstanding	10,250,120	10,444,291	10,312,878	10,483,466
Dilutive potential common shares <sup>(1)</sup>	750,349	752,912	733,929	750,659
Total diluted average common shares issued and outstanding	11,000,471	11,197,203	11,046,807	11,234,125
Diluted earnings per common share	\$0.41	\$ 0.38	\$1.10	\$ 1.03

<sup>(1)</sup> Includes incremental dilutive shares from restricted stock units, restricted stock, stock options and warrants.

The Corporation previously issued a warrant to purchase 700 million shares of the Corporation's common stock to the holder of the Series T Preferred Stock. The warrant may be exercised, at the option of the holder, through tendering the Series T Preferred Stock or paying cash. For both the three and nine months ended September 30, 2016 and 2015, the 700 million average dilutive potential common shares were included in the diluted share count under the "if-converted" method.

For both the three and nine months ended September 30, 2016 and 2015, 62 million average dilutive potential common shares associated with the 7.25% Non-Cumulative Perpetual Convertible Preferred Stock, Series L were not included in the diluted share count because the result would have been antidilutive under the "if-converted" method. For the three and nine months ended September 30, 2016, average options to purchase 42 million and 46 million shares of common stock were outstanding but not included in the computation of EPS because the result would have been antidilutive under the treasury stock method compared to 64 million and 67 million for the same periods in 2015. For both the three and nine months ended September 30, 2016 and 2015, average warrants to purchase 122 million shares of common stock were outstanding but not included in the computation of EPS because the result would have been antidilutive under the treasury stock method and average warrants to purchase 150 million shares of common stock were included in the diluted EPS calculation using the treasury stock method.

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### NOTE 14 – Fair Value Measurements

Under applicable accounting guidance, fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The Corporation determines the fair values of its financial instruments based on the fair value hierarchy established under applicable accounting guidance which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. There are three levels of inputs used to measure fair value. The Corporation conducts a review of its fair value hierarchy classifications on a quarterly basis. Transfers into or out of fair value hierarchy classifications are made if the significant inputs used in the financial models measuring the fair values of the assets and liabilities became unobservable or observable, respectively, in the current marketplace. These transfers are considered to be effective as of the beginning of the quarter in which they occur. For more information regarding the fair value hierarchy and how the Corporation measures fair value, see Note 1 – Summary of Significant Accounting Principles and Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K. The Corporation accounts for certain financial instruments under the fair value option. For additional information, see Note 15 – Fair Value Option.

### Valuation Processes and Techniques

The Corporation has various processes and controls in place to ensure that fair value is reasonably estimated. A model validation policy governs the use and control of valuation models used to estimate fair value. This policy requires review and approval of models by personnel who are independent of the front office, and periodic reassessments of models to ensure that they are continuing to perform as designed. In addition, detailed reviews of trading gains and losses are conducted on a daily basis by personnel who are independent of the front office. A price verification group, which is also independent of the front office, utilizes available market information including executed trades, market prices and market-observable valuation model inputs to ensure that fair values are reasonably estimated. The Corporation performs due diligence procedures over third-party pricing service providers in order to support their use in the valuation process. Where market information is not available to support internal valuations, independent reviews of the valuations are performed and any material exposures are escalated through a management review process.

While the Corporation believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

During the nine months ended September 30, 2016, there were no changes to the valuation techniques that had, or are expected to have, a material impact on the Corporation's consolidated financial position or results of operations.

### Level 1, 2 and 3 Valuation Techniques

Financial instruments are considered Level 1 when the valuation is based on quoted prices in active markets for identical assets or liabilities. Level 2 financial instruments are valued using quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or models using inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Financial instruments are considered Level 3 when their values are determined using pricing models, discounted cash flow methodologies or similar techniques, and at least one significant model assumption or input is unobservable and when determination of the fair value requires significant management judgment or estimation.





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## Recurring Fair Value

Assets and liabilities carried at fair value on a recurring basis at September 30, 2016 and December 31, 2015, including financial instruments which the Corporation accounts for under the fair value option, are summarized in the following tables.

(Dollars in millions)	September 30, 2016 Fair Value Measurements			Netting Adjustments (1)	Assets/Liabilities at Fair Value
	Level 1	Level 2	Level 3		
<b>Assets</b>					
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$51,638	\$—	\$—	\$ 51,638
Trading account assets:					
U.S. government and agency securities <sup>(2)</sup>	38,950	18,404	—	—	57,354
Corporate securities, trading loans and other	168	27,702	2,562	—	30,432
Equity securities	37,641	22,858	366	—	60,865
Non-U.S. sovereign debt	14,931	13,956	639	—	29,526
Mortgage trading loans and ABS	—	8,506	1,166	—	9,672
Total trading account assets <sup>(3)</sup>	91,690	91,426	4,733	—	187,849
Derivative assets <sup>(4)</sup>	7,515	775,954	4,867	(740,440 )	47,896
AFS debt securities:					
U.S. Treasury and agency securities	43,798	1,486	—	—	45,284
Mortgage-backed securities:					
Agency	—	201,051	—	—	201,051
Agency-collateralized mortgage obligations	—	9,081	—	—	9,081
Non-agency residential	—	1,391	227	—	1,618
Commercial	—	12,936	—	—	12,936
Non-U.S. securities	2,689	3,321	—	—	6,010
Other taxable securities	—	8,729	687	—	9,416
Tax-exempt securities	—	15,413	571	—	15,984
Total AFS debt securities	46,487	253,408	1,485	—	301,380
Other debt securities carried at fair value:					
Mortgage-backed securities:					
Agency-collateralized mortgage obligations	—	6	—	—	6
Non-agency residential	—	3,167	26	—	3,193
Non-U.S. securities	16,212	1,468	—	—	17,680
Other taxable securities	—	246	—	—	246
Total other debt securities carried at fair value	16,212	4,887	26	—	21,125
Loans and leases <sup>(5)</sup>	—	6,753	1,355	—	8,108
Mortgage servicing rights	—	—	2,477	—	2,477
Loans held-for-sale	—	4,065	587	—	4,652
Other assets	11,488	2,040	363	—	13,891
Total assets	\$173,392	\$1,190,171	\$15,893	\$(740,440 )	\$ 639,016
<b>Liabilities</b>					
Interest-bearing deposits in U.S. offices	\$—	\$913	\$—	\$—	\$ 913
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	31,530	338	—	31,868

## Trading account liabilities:

U.S. government and agency securities	9,515	273	—	—	9,788
Equity securities	42,193	3,344	—	—	45,537
Non-U.S. sovereign debt	13,131	2,234	—	—	15,365
Corporate securities and other	115	6,167	26	—	6,308
Total trading account liabilities	64,954	12,018	26	—	76,998
Derivative liabilities <sup>(4)</sup>	7,555	769,162	5,854	(739,087 )	43,484
Short-term borrowings	—	1,055	—	—	1,055
Accrued expenses and other liabilities	13,752	2,052	9	—	15,813
Long-term debt	—	30,685	1,934	—	32,619
Total liabilities	\$86,261	\$847,415	\$8,161	\$(739,087 )	\$ 202,750

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes \$18.4 billion of GSE obligations.

(3) Includes securities with a fair value of \$11.2 billion that were segregated in compliance with securities regulations or deposited with clearing organizations. This amount is included in the parenthetical disclosure on the Consolidated Balance Sheet.

(4) During the nine months ended September 30, 2016, \$1.4 billion of derivative assets and \$1.5 billion of derivative liabilities were transferred from Level 1 to Level 2 and \$1.6 billion of derivative assets and \$1.5 billion of derivative liabilities were transferred from Level 2 to Level 1 based on the inputs used to measure fair value. For further disaggregation of derivative assets and liabilities, see Note 2 – Derivatives.

(5) Includes \$655 million from CFEs that were measured using the fair value of the financial liabilities of those entities as the measurement basis.

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(Dollars in millions)	December 31, 2015 Fair Value Measurements			Netting Adjustments (1)	Assets/Liabilities at Fair Value
	Level 1	Level 2	Level 3		
<b>Assets</b>					
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$55,143	\$—	\$—	\$ 55,143
Trading account assets:					
U.S. government and agency securities <sup>(2)</sup>	33,034	15,501	—	—	48,535
Corporate securities, trading loans and other	325	22,738	2,838	—	25,901
Equity securities	41,735	20,887	407	—	63,029
Non-U.S. sovereign debt	15,651	12,915	521	—	29,087
Mortgage trading loans and ABS	—	8,107	1,868	—	9,975
Total trading account assets <sup>(3)</sup>	90,745	80,148	5,634	—	176,527
Derivative assets <sup>(4)</sup>	5,149	678,355	5,134	(638,648 )	49,990
AFS debt securities:					
U.S. Treasury and agency securities	23,374	1,903	—	—	25,277
Mortgage-backed securities:					
Agency	—	228,947	—	—	228,947
Agency-collateralized mortgage obligations	—	10,985	—	—	10,985
Non-agency residential	—	3,073	106	—	3,179
Commercial	—	7,165	—	—	7,165
Non-U.S. securities	2,768	2,999	—	—	5,767
Other taxable securities	—	9,688	757	—	10,445
Tax-exempt securities	—	13,439	569	—	14,008
Total AFS debt securities	26,142	278,199	1,432	—	305,773
Other debt securities carried at fair value:					
Mortgage-backed securities:					
Agency-collateralized mortgage obligations	—	7	—	—	7
Non-agency residential	—	3,460	30	—	3,490
Non-U.S. securities	11,691	1,152	—	—	12,843
Other taxable securities	—	267	—	—	267
Total other debt securities carried at fair value	11,691	4,886	30	—	16,607
Loans and leases	—	5,318	1,620	—	6,938
Mortgage servicing rights	—	—	3,087	—	3,087
Loans held-for-sale	—	4,031	787	—	4,818
Other assets <sup>(5)</sup>	11,923	2,023	374	—	14,320
Total assets	\$145,650	\$1,108,103	\$18,098	\$(638,648 )	\$ 633,203
<b>Liabilities</b>					
Interest-bearing deposits in U.S. offices	\$—	\$1,116	\$—	\$—	\$ 1,116
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	24,239	335	—	24,574
Trading account liabilities:					
U.S. government and agency securities	14,803	169	—	—	14,972
Equity securities	27,898	2,392	—	—	30,290
Non-U.S. sovereign debt	13,589	1,951	—	—	15,540
Corporate securities and other	193	5,947	21	—	6,161
Total trading account liabilities	56,483	10,459	21	—	66,963

Derivative liabilities <sup>(4)</sup>	4,941	670,600	5,575	(642,666 )	38,450
Short-term borrowings	—	1,295	30	—	1,325
Accrued expenses and other liabilities	11,656	2,234	9	—	13,899
Long-term debt	—	28,584	1,513	—	30,097
Total liabilities	\$73,080	\$738,527	\$7,483	\$(642,666 )	\$ 176,424

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes \$14.8 billion of GSE obligations.

(3) Includes securities with a fair value of \$16.4 billion that were segregated in compliance with securities regulations or deposited with clearing organizations. This amount is included in the parenthetical disclosure on the Consolidated Balance Sheet.

(4) During 2015, \$6.6 billion of derivative assets and \$6.7 billion of derivative liabilities were transferred from Level 1 to Level 2 based on inputs used to measure fair value. Additionally, \$6.4 billion of derivative assets and \$6.2 billion of derivative liabilities were transferred from Level 2 to Level 1 due to additional information related to certain options. For further disaggregation of derivative assets and liabilities, see Note 2 – Derivatives.

(5) During 2015, approximately \$327 million of assets were transferred from Level 2 to Level 1 due to a restriction that was lifted for an equity investment.

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The following tables present a reconciliation of all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the three and nine months ended September 30, 2016 and 2015, including net realized and unrealized gains (losses) included in earnings and accumulated OCI.

Level 3 – Fair Value Measurements<sup>(1)</sup>

(Dollars in millions)	Three Months Ended September 30, 2016									
	Balance July 1 2016	Gains (Losses) in Earnings	Gains (Losses) in OCI	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2016
Trading account assets:										
Corporate securities, trading loans and other	\$2,654	\$ 57	\$ —	\$226	\$(245)	\$ —	\$(134)	\$ 202	\$(198)	\$ 2,562
Equity securities	455	11	—	10	(98)	—	—	27	(39)	366
Non-U.S. sovereign debt	630	20	(7)	—	—	—	(4)	—	—	639
Mortgage trading loans and ABS	1,286	102	—	331	(441)	—	(103)	15	(24)	1,166
Total trading account assets	5,025	190	(7)	567	(784)	—	(241)	244	(261)	4,733
Net derivative assets <sup>(3)</sup>	(648)	(131)	—	114	(346)	—	118	(53)	(41)	(987)
AFS debt securities:										
Non-agency residential MBS	134	—	—	189	—	—	(102)	6	—	227
Other taxable securities	717	1	(1)	—	—	—	(30)	—	—	687
Tax-exempt securities	559	—	2	—	—	—	—	10	—	571
Total AFS debt securities	1,410	1	1	189	—	—	(132)	16	—	1,485
Other debt securities carried at fair value – Non-agency residential MBS										
Loans and leases <sup>(4, 5)</sup>	1,459	(9)	—	—	—	—	(54)	—	(41)	1,355
Mortgage servicing rights <sup>(5)</sup>	2,269	313	—	—	—	101	(206)	—	—	2,477
Loans held-for-sale <sup>(4)</sup>	690	13	(4)	—	(56)	—	(25)	4	(35)	587
Other assets	348	11	—	4	—	—	—	—	—	363
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(4)</sup>	(313)	(17)	—	—	—	—	10	(19)	1	(338)
Trading account liabilities – Corporate securities and other	(26)	2	—	—	(2)	—	—	—	—	(26)
Accrued expenses and other liabilities <sup>(9)</sup>	(9)	—	—	—	—	—	—	—	—	(9)
Long-term debt <sup>(4)</sup>	(2,156)	(22)	(23)	15	—	(3)	363	(206)	98	(1,934)

<sup>(1)</sup> Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

Includes unrealized gains (losses) on AFS debt securities, foreign currency translation adjustments and the impact

<sup>(2)</sup> on structured liabilities of changes in the Corporation's credit spreads. For additional information, see Note 1 – Summary of Significant Accounting Principles.

<sup>(3)</sup> Net derivatives include derivative assets of \$4.9 billion and derivative liabilities of \$5.9 billion.

<sup>(4)</sup> Amounts represent instruments that are accounted for under the fair value option.

<sup>(5)</sup> Issuances represent loan originations and MSRs retained following securitizations or whole-loan sales.

Significant transfers into Level 3, primarily due to decreased price observability, during the three months ended September 30, 2016 included:

\$244 million of trading account assets

\$206 million of long-term debt. Transfers occur on a regular basis for these long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability, during the three months ended September 30, 2016 included \$261 million of trading account assets.

Table of ContentsLevel 3 – Fair Value Measurements<sup>(1)</sup>

(Dollars in millions)	Three Months Ended September 30, 2015									
	Balance July 1 2015	Gross						Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2015
		Gains (Losses) in Earnings	Gains (Losses) in OCI <sup>(2)</sup>	Purchases	Sales	Issuances	Settlements			
Trading account assets:										
Corporate securities, trading loans and other	\$3,326	\$ (6 )	\$ (11 )	\$553	\$(681)	\$ —	\$(295 )	\$ 238	\$(225 )	\$ 2,899
Equity securities	386	(1 )	—	32	—	—	(6 )	2	(3 )	410
Non-U.S. sovereign debt	468	12	(102 )	7	(1 )	—	—	—	—	384
Mortgage trading loans and ABS	2,159	(7 )	—	293	(264 )	—	(157 )	2	(21 )	2,005
Total trading account assets	6,339	(2 )	(113 )	885	(946 )	—	(458 )	242	(249 )	5,698
Net derivative assets <sup>(3)</sup>	(351 )	1,042	(5 )	80	(290 )	—	(115 )	(20 )	56	397
AFS debt securities:										
Non-agency residential MBS	234	—	(2 )	41	—	—	(47 )	—	(37 )	189
Non-U.S. securities	9	—	—	—	—	—	(6 )	—	—	3
Other taxable securities	677	—	(2 )	—	—	—	(88 )	—	(6 )	581
Tax-exempt securities	584	—	—	—	—	—	(15 )	—	—	569
Total AFS debt securities	1,504	—	(4 )	41	—	—	(156 )	—	(43 )	1,342
Other debt securities carried at fair value – Non-agency residential MBS	34	(3 )	—	—	—	—	—	—	—	31
Loans and leases <sup>(4,5)</sup>	1,970	17	—	—	(1 )	57	(59 )	7	(7 )	1,984
Mortgage servicing rights <sup>(5)</sup>	3,521	(363 )	—	—	(87 )	185	(213 )	—	—	3,043
Loans held-for-sale <sup>(4)</sup>	660	—	—	2	(79 )	3	(6 )	7	(28 )	559
Other assets	756	(42 )	—	3	(11 )	—	(17 )	—	(15 )	674
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(4)</sup>	(368 )	—	—	—	—	(5 )	208	(32 )	1	(196 )
Trading account liabilities –										
Corporate securities and other	(57 )	—	—	—	19	—	—	—	—	(38 )
Short-term borrowings <sup>(4)</sup>	—	4	—	—	—	(3 )	—	(19 )	—	(18 )
Accrued expenses and other liabilities	(9 )	—	—	—	—	—	—	—	—	(9 )
Long-term debt <sup>(4)</sup>	(2,716 )	252	—	139	—	(40 )	59	(264 )	660	(1,910 )

<sup>(1)</sup> Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

Includes unrealized gains (losses) on AFS debt securities, foreign currency translation adjustments and the impact

<sup>(2)</sup> on structured liabilities of changes in the Corporation's credit spreads. For additional information, see Note 1 – Summary of Significant Accounting Principles.

<sup>(3)</sup> Net derivatives include derivative assets of \$6.0 billion and derivative liabilities of \$5.6 billion.

<sup>(4)</sup> Amounts represent instruments that are accounted for under the fair value option.

<sup>(5)</sup> Issuances represent loan originations and MSR retained following securitizations or whole-loan sales.

Significant transfers into Level 3, primarily due to decreased price observability, during the three months ended September 30, 2015 included:

\$242 million of trading account assets

\$264 million of long-term debt. Transfers occur on a regular basis for these long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.



Significant transfers out of Level 3, primarily due to increased price observability unless otherwise noted, during the three months ended September 30, 2015 included:

\$249 million of trading account assets, primarily the result of increased market liquidity

\$660 million of long-term debt

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Level 3 – Fair Value Measurements<sup>(1)</sup>

(Dollars in millions)	Nine Months Ended September 30, 2016									
	Balance January 1 2016	Gains (Losses) in Earnings	Gains (Losses) in OCI <sup>(2)</sup>	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2016
Trading account assets:										
Corporate securities, trading loans and other	\$2,838	\$ 118	\$ 2	\$925	\$(638)	\$ —	\$(479)	\$ 432	\$(636)	\$ 2,562
Equity securities	407	93	—	53	(135)	—	(72)	60	(40)	366
Non-U.S. sovereign debt	521	112	91	3	(1)	—	(87)	—	—	639
Mortgage trading loans and ABS	1,868	197	(2)	681	(1,264)	—	(270)	91	(135)	1,166
Total trading account assets	5,634	520	91	1,662	(2,038)	—	(908)	583	(811)	4,733
Net derivative assets <sup>(3)</sup>	(441)	)356	—	313	(965)	—	7	(177)	)80	)987
AFS debt securities:										
Non-agency residential MBS	106	—	3	385	(92)	—	(181)	6	—	227
Other taxable securities	757	3	(7)	—	—	—	(66)	—	—	687
Tax-exempt securities	569	—	(8)	1	—	—	(1)	10	—	571
Total AFS debt securities	1,432	3	(12)	386	(92)	—	(248)	16	—	1,485
Other debt securities carried at fair value – Non-agency residential MBS	30	(4)	—	—	—	—	—	—	—	26
Loans and leases <sup>(4, 5)</sup>	1,620	(13)	—	69	—	50	(143)	6	(234)	1,355
Mortgage servicing rights <sup>(5)</sup>	3,087	(295)	—	—	—	307	(622)	—	—	2,477
Loans held-for-sale <sup>(4)</sup>	787	97	51	20	(236)	—	(77)	43	(98)	587
Other assets	374	(27)	—	38	—	—	(24)	2	—	363
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(4)</sup>	(335)	)12	—	—	—	(14)	17	(19)	)1	(338)
Trading account liabilities –										
Corporate securities and other	(21)	)4	—	1	(10)	—	—	—	—	(26)
Short-term borrowings <sup>(4)</sup>	(30)	)1	—	—	—	—	29	—	—	—
Accrued expenses and other liabilities	(9)	—	—	—	—	—	—	—	—	(9)
Long-term debt <sup>(4)</sup>	(1,513)	)192	(41)	44	—	(326)	496	(751)	)349	(1,934)

- (1) Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3. Includes unrealized gains (losses) on AFS debt securities, foreign currency translation adjustments and the impact
- (2) on structured liabilities of changes in the Corporation's credit spreads. For additional information, see Note 1 – Summary of Significant Accounting Principles.
- (3) Net derivatives include derivative assets of \$4.9 billion and derivative liabilities of \$5.9 billion.
- (4) Amounts represent instruments that are accounted for under the fair value option.
- (5) Issuances represent loan originations and MSRs retained following securitizations or whole-loan sales.

Significant transfers into Level 3, primarily due to decreased price observability, during the nine months ended September 30, 2016 included:

\$583 million of trading account assets  
 \$177 million of net derivative assets

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\$751 million of long-term debt. Transfers occur on a regular basis for these long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability, during the nine months ended September 30, 2016 included:

\$811 million of trading account assets

\$234 million of loans and leases

\$349 million of long-term debt

Table of ContentsLevel 3 – Fair Value Measurements<sup>(1)</sup>

(Dollars in millions)	Nine Months Ended September 30, 2015									
	Balance January 1 2015	Gains (Losses) in Earnings	Gains (Losses) in OCI <sup>(2)</sup>	Gross		Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2015
			Purchases	Sales						
Trading account assets:										
Corporate securities, trading loans and other	\$3,270	\$ 28	\$(11)	\$1,030	\$(1,119)	\$ —	\$(944)	\$1,221	\$(576)	\$ 2,899
Equity securities	352	13	—	48	(3)	—	(11)	33	(22)	410
Non-U.S. sovereign debt	574	94	(180)	34	(1)	—	(110)	—	(27)	384
Mortgage trading loans and ABS	2,063	154	—	1,102	(891)	—	(401)	12	(34)	2,005
Total trading account assets	6,259	289	(191)	2,214	(2,014)	—	(1,466)	1,266	(659)	5,698
Net derivative assets <sup>(3)</sup>	(920)	1,608	(5)	193	(683)	—	106	(80)	178	397
AFS debt securities:										
Non-agency residential MBS	279	(12)	5	103	—	—	(281)	132	(37)	189
Non-U.S. securities	10	—	—	—	—	—	(7)	—	—	3
Other taxable securities	1,667	—	(2)	6	—	—	(151)	—	(939)	581
Tax-exempt securities	599	—	(1)	—	—	—	(29)	—	—	569
Total AFS debt securities	2,555	(12)	2	109	—	—	(468)	132	(976)	1,342
Other debt securities carried at fair value – Non-agency residential MBS										
Loans and leases <sup>(4, 5)</sup>	1,983	22	—	—	(3)	57	(179)	125	(21)	1,984
Mortgage servicing rights <sup>(5)</sup>	3,530	10	—	—	(399)	568	(666)	—	—	3,043
Loans held-for-sale <sup>(4)</sup>	173	(48)	—	493	(174)	36	(12)	184	(93)	559
Other assets	911	(46)	—	12	(129)	—	(32)	8	(50)	674
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(4)</sup>	—	(14)	—	—	—	(33)	208	(358)	1	(196)
Trading account liabilities –										
Corporate securities and other	(36)	3	—	33	(38)	—	—	—	—	(38)
Short-term borrowings <sup>(4)</sup>	—	9	—	—	—	(24)	1	(23)	19	(18)
Accrued expenses and other liabilities	(10)	1	—	—	—	—	—	—	—	(9)
Long-term debt <sup>(4)</sup>	(2,362)	322	—	316	—	(179)	219	(1,380)	1,154	(1,910)

<sup>(1)</sup> Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

Includes unrealized gains (losses) on AFS debt securities, foreign currency translation adjustments and the impact

<sup>(2)</sup> on structured liabilities of changes in the Corporation's credit spreads. For additional information, see Note 1 – Summary of Significant Accounting Principles.

<sup>(3)</sup> Net derivatives include derivative assets of \$6.0 billion and derivative liabilities of \$5.6 billion.

<sup>(4)</sup> Amounts represent instruments that are accounted for under the fair value option.

<sup>(5)</sup> Issuances represent loan originations and MSRs retained following securitizations or whole-loan sales.

Significant transfers into Level 3, primarily due to decreased price observability, during the nine months ended September 30, 2015 included:

\$1.3 billion of trading account assets

\$132 million of AFS debt securities

\$125 million of loans and leases

\$184 million of LHFS

\$358 million of federal funds purchased and securities loaned or sold under agreements to repurchase

\$1.4 billion of long-term debt. Transfers occur on a regular basis for these long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability unless otherwise noted, during the nine months ended September 30, 2015 included:

\$659 million of trading account assets, primarily the result of increased market liquidity

\$178 million of net derivative assets

\$976 million of AFS debt securities

\$1.2 billion of long-term debt



(2) Amounts represent instruments that are accounted for under the fair value option.

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- (1) Mortgage banking income (loss) does not reflect the impact of Level 1 and Level 2 hedges on MSR.
- (2) Amounts represent instruments that are accounted for under the fair value option.





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Level 3 – Changes in Unrealized Gains (Losses) Relating to Assets and Liabilities	Still Held at Reporting Date			
	Nine Months Ended September 30, 2016			
(Dollars in millions)	Trading Account Profits (Losses)	Mortgage Banking Income (Loss)	Other	Total
	(1)			
Trading account assets:				
Corporate securities, trading loans and other	\$ 11	\$ —	\$ —	\$ 11
Equity securities	(19 )	—	—	(19 )
Non-U.S. sovereign debt	110	—	—	110
Mortgage trading loans and ABS	110	—	—	110
Total trading account assets	212	—	—	212
Net derivative assets	(168 )	75	(15 )	(108 )
Loans and leases (2)	—	—	(3 )	(3 )
Mortgage servicing rights	7	(464 )	—	(457 )
Loans held-for-sale (2)	—	—	76	76
Other assets	—	(25 )	10	(15 )
Federal funds purchased and securities loaned or sold under agreements to repurchase (2)	(21 )	—	—	(21 )
Trading account liabilities – Corporate securities and other	3	—	—	3
Long-term debt (2)	(208 )	—	—	(208 )
Total	\$(175 )	\$(414 )	\$68	\$(521 )
				Nine Months Ended September 30, 2015
Trading account assets:				
Corporate securities, trading loans and other	\$(102 )	\$ —	\$ —	\$(102 )
Equity securities	7	—	—	7
Non-U.S. sovereign debt	81	—	—	81
Mortgage trading loans and ABS	(28 )	—	—	(28 )
Total trading account assets	(42 )	—	—	(42 )
Net derivative assets	1,037	59	44	1,140
Loans and leases (2)	—	—	50	50
Mortgage servicing rights	2	(213 )	—	(211 )
Loans held-for-sale (2)	(1 )	—	(30 )	(31 )
Other assets	—	(38 )	(8 )	(46 )
Federal funds purchased and securities loaned or sold under agreements to repurchase (2)	(3 )	—	—	(3 )
Trading account liabilities – Corporate securities and other	1	—	—	1
Short-term borrowings (2)	4	—	—	4
Accrued expenses and other liabilities	—	—	1	1
Long-term debt (2)	308	—	1	309
Total	\$1,306	\$(192 )	\$58	\$1,172

(1) Mortgage banking income (loss) does not reflect the impact of Level 1 and Level 2 hedges on MSRs.

(2) Amounts represent instruments that are accounted for under the fair value option.



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The following tables present information about significant unobservable inputs related to the Corporation's material categories of Level 3 financial assets and liabilities at September 30, 2016 and December 31, 2015.

## Quantitative Information about Level 3 Fair Value Measurements at September 30, 2016

(Dollars in millions)

Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average	
Loans and Securities <sup>(1)</sup> Instruments backed by residential real estate assets	\$1,688		Yield	0% to 25%	6	%
Trading account assets – Mortgage trading loans and ABS	324	Discounted cash flow, Market comparables	Prepayment speed	0% to 37% CPR	14	%
Loans and leases	1,353		Default rate	0% to 10% CDR	3	%
Loans held-for-sale Instruments backed by commercial real estate assets	11 \$295		Loss severity Yield	0% to 100% 0% to 25%	45 12	% %
Trading account assets – Corporate securities, trading loans and other	219	Discounted cash flow, Market comparables	Price	\$0 to \$100	\$69	
Trading account assets – Mortgage trading loans and ABS	62					
Loans held-for-sale	14					
Commercial loans, debt securities and other	\$4,397		Yield	0% to 46%	18	%
Trading account assets – Corporate securities, trading loans and other	2,304		Prepayment speed	5% to 20%	14	%
Trading account assets – Non-U.S. sovereign debt	639	Discounted cash flow, Market comparables	Default rate	3% to 4%	4	%
Trading account assets – Mortgage trading loans and ABS	780		Loss severity	35% to 50%	38	%
AFS debt securities – Other taxable securities	110		Duration	0 to 5 years	3 years	
Loans and leases	2		Price	\$0 to \$205	\$70	
Loans held-for-sale	562					
Auction rate securities	\$1,187	Discounted cash flow, Market comparables	Price	\$10 to \$100	\$93	
Trading account assets – Corporate securities, trading loans and other	39					
AFS debt securities – Other taxable securities	577					
	571					

AFS debt securities –						
Tax-exempt securities						
Structured liabilities						
Long-term debt	\$(1,934)		Equity correlation	19% to 100%	68	%
		Discounted cash flow, Market comparables, Industry standard derivative pricing <sup>(2)</sup>	Long-dated equity volatilities	4% to 101%	26	%
			Yield	9% to 46%	18	%
			Duration	0 to 5 years	2 years	
			Price	\$0 to \$100	\$79	
Net derivative assets						
Credit derivatives	\$(45 )		Yield	1% to 25%	16	%
			Upfront points	1 point to 100 points	74 points	
		Discounted cash flow, Stochastic recovery correlation model	Credit spreads	18 bps to 924 bps	287 bps	
			Credit correlation	11% to 93%	37	%
			Prepayment speed	7% to 20% CPR	18	%
			Default rate	0% to 4% CDR	3	%
			Loss severity	35	% n/a	
Equity derivatives	\$(1,298)	Industry standard derivative pricing <sup>(2)</sup>	Equity correlation	19% to 100%	68	%
			Long-dated equity volatilities	4% to 101%	26	%
Commodity derivatives	\$7	Discounted cash flow, Industry standard derivative pricing <sup>(2)</sup>	Natural gas forward price	\$2/MMBtu to \$7/MMBtu	\$4/MMBtu	
			Correlation	66% to 93%	86	%
			Volatilities	23% to 71%	36	%
Interest rate derivatives	\$349		Correlation (IR/IR)	15% to 99%	60	%
		Industry standard derivative pricing <sup>(3)</sup>	Correlation (FX/IR)	-2% to 40%	3	%
			Illiquid IR and long-dated inflation rates	-12% to 38%	5	%
			Long-dated inflation volatilities	0% to 2%	1	%
Total net derivative assets \$(987 )						

The categories are aggregated based upon product type which differs from financial statement classification. The following is a reconciliation to the line items in the table on page 163: Trading account assets – Corporate securities, (1) trading loans and other of \$2.6 billion, Trading account assets – Non-U.S. sovereign debt of \$639 million, Trading account assets – Mortgage trading loans and ABS of \$1.2 billion, AFS debt securities – Other taxable securities of \$687 million, AFS debt securities – Tax-exempt securities of \$571 million, Loans and leases of \$1.4 billion and LHFS of \$587 million.

(2) Includes models such as Monte Carlo simulation and Black-Scholes.

(3) Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.

CPR = Constant Prepayment Rate

CDR = Constant Default Rate

MMBtu = Million British thermal units

IR = Interest Rate

FX = Foreign Exchange

n/a = not applicable





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## Quantitative Information about Level 3 Fair Value Measurements at December 31, 2015

(Dollars in millions)

Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average	
Loans and Securities <sup>(1)</sup>						
Instruments backed by residential real estate assets	\$2,017		Yield	0% to 25%	6	%
Trading account assets – Mortgage trading loans and ABS	400	Discounted cash flow, Market comparables	Prepayment speed	0% to 27% CPR	11	%
Loans and leases	1,520		Default rate	0% to 10% CDR	4	%
Loans held-for-sale	97		Loss severity	0% to 90%	40	%
Instruments backed by commercial real estate assets	\$852		Yield	0% to 25%	8	%
Trading account assets – Mortgage trading loans and ABS	162	Discounted cash flow, Market comparables	Price	\$0 to \$100	\$73	
Loans held-for-sale	690					
Commercial loans, debt securities and other	\$4,558		Yield	0% to 37%	13	%
Trading account assets – Corporate securities, trading loans and other	2,503		Prepayment speed	5% to 20%	16	%
Trading account assets – Non-U.S. sovereign debt	521	Discounted cash flow, Market comparables	Default rate	2% to 5%	4	%
Trading account assets – Mortgage trading loans and ABS	1,306		Loss severity	25% to 50%	37	%
AFS debt securities – Other taxable securities	128		Duration	0 to 5 years	3 years	
Loans and leases	100		Price	\$0 to \$258	\$64	
Auction rate securities	\$1,533		Price	\$10 to \$100	\$94	
Trading account assets – Corporate securities, trading loans and other	335					
AFS debt securities – Other taxable securities	629	Discounted cash flow, Market comparables				
AFS debt securities – Tax-exempt securities	569					
Structured liabilities						
Long-term debt	\$(1,513)	Industry standard derivative pricing <sup>(2, 3)</sup>	Equity correlation	25% to 100%	67	%
			Long-dated equity volatilities	4% to 101%	28	%
Net derivative assets						
Credit derivatives	\$(75 )		Yield	6% to 25%	16	%
			Upfront points	0 to 100 points	60 points	
		Discounted cash flow, Stochastic recovery correlation model	Credit spreads		111 bps	

			0 bps to 447 bps		
		Credit correlation	31% to 99%	38	%
		Prepayment speed	10% to 20% CPR	19	%
		Default rate	1% to 4% CDR	3	%
		Loss severity	35% to 40%	35	%
Equity derivatives	\$(1,037)	Equity correlation	25% to 100%	67	%
		Long-dated equity volatilities	4% to 101%	28	%
		Natural gas forward price	\$1/MMBtu to \$6/MMBtu		\$4/MMBtu
Commodity derivatives	\$169	Propane forward price	\$0/Gallon to \$1/Gallon		\$1/Gallon
		Correlation	66% to 93%	84	%
		Volatilities	18% to 125%	39	%
Interest rate derivatives	\$502	Correlation (IR/IR)	17% to 99%	48	%
		Correlation (FX/IR)	-15% to 40%	-9	%
		Long-dated inflation rates	0% to 7%	3	%
		Long-dated inflation volatilities	0% to 2%	1	%

Total net derivative assets \$(441 )

The categories are aggregated based upon product type which differs from financial statement classification. The following is a reconciliation to the line items in the table on page 164: Trading account assets – Corporate securities, trading loans and other of \$2.8 billion, Trading account assets – Non-U.S. sovereign debt of \$521 million, Trading (1) account assets – Mortgage trading loans and ABS of \$1.9 billion, AFS debt securities – Other taxable securities of \$757 million, AFS debt securities – Tax-exempt securities of \$569 million, Loans and leases of \$1.6 billion and LHFS of \$787 million.

(2) Includes models such as Monte Carlo simulation and Black-Scholes.

(3) Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.

CPR = Constant Prepayment Rate

CDR = Constant Default Rate

MMBtu = Million British thermal units

IR = Interest Rate

FX = Foreign Exchange

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In the tables above, instruments backed by residential and commercial real estate assets include RMBS, commercial MBS, whole loans and mortgage CDOs. Commercial loans, debt securities and other include corporate CLOs and CDOs, commercial loans and bonds, and securities backed by non-real estate assets. Structured liabilities primarily include equity-linked notes that are accounted for under the fair value option.

The Corporation uses multiple market approaches in valuing certain of its Level 3 financial instruments. For example, market comparables and discounted cash flows are used together. For a given product, such as corporate debt securities, market comparables may be used to estimate some of the unobservable inputs and then these inputs are incorporated into a discounted cash flow model. Therefore, the balances disclosed encompass both of these techniques.

The level of aggregation and diversity within the products disclosed in the tables result in certain ranges of inputs being wide and unevenly distributed across asset and liability categories.

For more information on the inputs and techniques used in the valuation of MSRs, see Note 17 – Mortgage Servicing Rights.

### Sensitivity of Fair Value Measurements to Changes in Unobservable Inputs

#### Loans and Securities

For instruments backed by residential real estate assets, commercial real estate assets and commercial loans, debt securities and other, a significant increase in market yields, default rates, loss severities or duration would result in a significantly lower fair value for long positions. Short positions would be impacted in a directionally opposite way. The impact of changes in prepayment speeds would have differing impacts depending on the seniority of the instrument and, in the case of CLOs, whether prepayments can be reinvested.

For instruments backed by commercial real estate assets and auction rate securities, a significant increase in price would result in a significantly higher fair value.

#### Structured Liabilities and Derivatives

For credit derivatives, a significant increase in market yield, upfront points (i.e., a single upfront payment made by a protection buyer at inception), credit spreads, default rates or loss severities would result in a significantly lower fair value for protection sellers and higher fair value for protection buyers. The impact of changes in prepayment speeds would have differing impacts depending on the seniority of the instrument and, in the case of CLOs, whether prepayments can be reinvested.

Structured credit derivatives are impacted by credit correlation. Default correlation is a parameter that describes the degree of dependence among credit default rates within a credit portfolio that underlies a credit derivative instrument. The sensitivity of this input on the fair value varies depending on the level of subordination of the tranche. For senior tranches that are net purchases of protection, a significant increase in default correlation would result in a significantly higher fair value. Net short protection positions would be impacted in a directionally opposite way.

For equity derivatives, commodity derivatives, interest rate derivatives and structured liabilities, a significant change in long-dated rates and volatilities and correlation inputs (e.g., the degree of correlation between an equity security and an index, between two different commodities, between two different interest rates, or between interest rates and foreign exchange rates) would result in a significant impact to the fair value; however, the magnitude and direction of the impact depends on whether the Corporation is long or short the exposure. For structured liabilities, a significant

increase in yield or decrease in price would result in a significantly lower fair value. A significant decrease in duration may result in a significantly higher fair value.

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## Nonrecurring Fair Value

The Corporation holds certain assets that are measured at fair value, but only in certain situations (e.g., impairment) and these measurements are referred to herein as nonrecurring. The amounts below represent assets still held as of the reporting date for which a nonrecurring fair value adjustment was recorded during the three and nine months ended September 30, 2016 and 2015.

## Assets Measured at Fair Value on a Nonrecurring Basis

(Dollars in millions)	Level 2	Level 3	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2016	
			Gains	(Losses)	Gains	(Losses)
Assets						
Loans held-for-sale	\$ 191	\$ 48	\$(1)	\$(44)		
Loans and leases <sup>(1)</sup>	—	1,333	(143)	(399)		
Foreclosed properties <sup>(2, 3)</sup>	—	113	(23)	(41)		
Other assets	173	—	(18)	(44)		

Assets	Level 2	Level 3	Three Months Ended September 30, 2015		Nine Months Ended September 30, 2015	
			Gains	(Losses)	Gains	(Losses)
Loans held-for-sale	\$ 10	\$ 34	\$—	\$(7)		
Loans and leases <sup>(1)</sup>	67	2,363	(228)	(811)		
Foreclosed properties <sup>(2, 3)</sup>	—	149	(36)	(58)		
Other assets	39	—	(4)	(8)		

Includes \$48 million and \$112 million of losses on loans that were written down to a collateral value of zero during <sup>(1)</sup> the three and nine months ended September 30, 2016 compared to losses of \$72 million and \$146 million for the same periods in 2015.

Amounts are included in other assets on the Consolidated Balance Sheet and represent the carrying value of foreclosed properties that were written down subsequent to their initial classification as foreclosed properties.

<sup>(2)</sup> Losses on foreclosed properties include losses taken during the first 90 days after transfer of a loan to foreclosed properties.

<sup>(3)</sup> Excludes \$1.3 billion of properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans) at both September 30, 2016 and 2015.

The table below presents information about significant unobservable inputs related to the Corporation's nonrecurring Level 3 financial assets and liabilities at September 30, 2016 and December 31, 2015. Instruments backed by residential real estate assets represent residential mortgages where the loan has been written down to the fair value of the underlying collateral.

Quantitative Information about Nonrecurring Level 3 Fair Value Measurements

September 30, 2016

(Dollars in millions)

Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average
Loans and leases backed by residential real estate assets	\$1,333	Market comparables	OREO discount Cost to sell	8% to 56% 8% to 45%	21 % 10 %

December 31, 2015

Loans and leases backed by residential real estate assets	\$ 2,739	Market comparables	OREO discount Cost to sell	7% to 55% 8% to 45%	20 % 10 %
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## NOTE 15 – Fair Value Option

The Corporation elects to account for certain financial instruments under the fair value option. For more information on the primary financial instruments for which the fair value option elections have been made, see Note 21 – Fair Value Option to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

The table below provides information about the fair value carrying amount and the contractual principal outstanding of assets and liabilities accounted for under the fair value option at September 30, 2016 and December 31, 2015.

## Fair Value Option Elections

(Dollars in millions)	September 30, 2016			December 31, 2015		
	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal
Federal funds sold and securities borrowed or purchased under agreements to resell	\$51,638	\$ 51,516	\$ 122	\$55,143	\$ 54,999	\$ 144
Loans reported as trading account assets <sup>(1)</sup>	5,653	11,134	(5,481 )	4,995	9,214	(4,219 )
Trading inventory – other	8,701	n/a	n/a	8,149	n/a	n/a
Consumer and commercial loans	8,108	8,132	(24 )	6,938	7,293	(355 )
Loans held-for-sale	4,652	5,979	(1,327 )	4,818	6,157	(1,339 )
Other assets	314	250	64	275	270	5
Long-term deposits	913	782	131	1,116	1,021	95
Federal funds purchased and securities loaned or sold under agreements to repurchase	31,868	32,031	(163 )	24,574	24,718	(144 )
Short-term borrowings	1,055	1,055	—	1,325	1,325	—
Unfunded loan commitments	216	n/a	n/a	658	n/a	n/a
Long-term debt <sup>(2)</sup>	32,619	32,650	(31 )	30,097	30,593	(496 )

A significant portion of the loans reported as trading account assets are distressed loans which trade and were <sup>(1)</sup> purchased at a deep discount to par, and the remainder are loans with a fair value near contractual principal outstanding.

<sup>(2)</sup> Includes structured liabilities with a fair value of \$31.6 billion and \$29.0 billion, and contractual principal outstanding of \$31.5 billion and \$29.4 billion at September 30, 2016 compared to December 31, 2015.

n/a = not applicable

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The following tables provide information about where changes in the fair value of assets and liabilities accounted for under the fair value option are included in the Consolidated Statement of Income for the three and nine months ended September 30, 2016 and 2015.

## Gains (Losses) Relating to Assets and Liabilities Accounted for Under the Fair Value Option

(Dollars in millions)	Three Months Ended September 30, 2016			Total
	Trading Account Profits (Losses)	Mortgage Banking Income (Loss)	Other Income (Loss)	
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ (25 )	\$ —	\$ —	\$ (25 )
Loans reported as trading account assets	125	—	—	125
Trading inventory – other <sup>(1)</sup>	907	—	—	907
Consumer and commercial loans	(8 )	—	13	5
Loans held-for-sale <sup>(2)</sup>	5	132	2	139
Other assets	—	—	23	23
Long-term deposits	4	—	4	8
Federal funds purchased and securities loaned or sold under agreements to repurchase	(3 )	—	—	(3 )
Unfunded loan commitments	—	—	133	133
Long-term debt <sup>(3, 4)</sup>	(138 )	—	(24 )	(162 )
Total	\$ 867	\$ 132	\$ 151	\$ 1,150
	Three Months Ended September 30, 2015			
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ 7	\$ —	\$ —	\$ 7
Loans reported as trading account assets	(30 )	—	—	(30 )
Trading inventory – other <sup>(1)</sup>	273	—	—	273
Consumer and commercial loans	11	—	(129 )	(118 )
Loans held-for-sale <sup>(2)</sup>	(4 )	155	11	162
Other assets	—	—	(3 )	(3 )
Long-term deposits	(4 )	—	(16 )	(20 )
Federal funds purchased and securities loaned or sold under agreements to repurchase	(23 )	—	—	(23 )
Unfunded loan commitments	—	—	(201 )	(201 )
Short-term borrowings	1	—	—	1
Long-term debt <sup>(3, 4)</sup>	1,297	—	(54 )	1,243
Total	\$ 1,528	\$ 155	\$ (392 )	\$ 1,291

(1) The gains (losses) in trading account profits (losses) are primarily offset by gains (losses) on trading liabilities that hedge these assets.

(2) Includes the value of IRLCs on funded loans, including those sold during the period.

The majority of the net gains (losses) in trading account profits relate to the embedded derivative in structured liabilities and are offset by gains (losses) on derivatives and securities that hedge these liabilities. For more information on the adoption of new accounting guidance relating to DVA on structured liabilities, see Note 1 – Summary of Significant Accounting Principles.

(4)



For the cumulative impact of changes in the Corporation's own credit spreads and the amount recognized in OCI, see Note 12 – Accumulated Other Comprehensive Income (Loss). For more information on how the Corporation's own credit spread is determined, see Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

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## Gains (Losses) Relating to Assets and Liabilities Accounted for Under the Fair Value Option

(Dollars in millions)	Nine Months Ended September 30, 2016			Total
	Trading Account Profits (Losses)	Mortgage Banking Income (Loss)	Other Income (Loss)	
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ (26 )	\$ —	\$ —	\$ (26 )
Loans reported as trading account assets	251	—	—	251
Trading inventory – other <sup>(1)</sup>	551	—	—	551
Consumer and commercial loans	26	—	(8 )	18
Loans held-for-sale <sup>(2)</sup>	10	493	57	560
Other assets	—	—	20	20
Long-term deposits	(7 )	—	(26 )	(33 )
Unfunded loan commitments	—	—	444	444
Long-term debt <sup>(3, 4)</sup>	(718 )	—	(77 )	(795 )
Total	\$ 87	\$ 493	\$ 410	\$ 990

(Dollars in millions)	Nine Months Ended September 30, 2015			Total
	Trading Account Profits (Losses)	Mortgage Banking Income (Loss)	Other Income (Loss)	
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ (81 )	\$ —	\$ —	\$ (81 )
Loans reported as trading account assets	(98 )	—	—	(98 )
Trading inventory – other <sup>(1)</sup>	447	—	—	447
Consumer and commercial loans	40	—	(196 )	(156 )
Loans held-for-sale <sup>(2)</sup>	(25 )	567	99	641
Other assets	—	—	4	4
Long-term deposits	(4 )	—	5	1
Federal funds purchased and securities loaned or sold under agreements to repurchase	25	—	—	25
Unfunded loan commitments	—	—	(146 )	(146 )
Long-term debt <sup>(3, 4)</sup>	1,887	—	(604 )	1,283
Total	\$ 2,191	\$ 567	\$ (838 )	\$ 1,920

(1) The gains (losses) in trading account profits (losses) are primarily offset by gains (losses) on trading liabilities that hedge these assets.

(2) Includes the value of IRLCs on funded loans, including those sold during the period.

The majority of the net gains (losses) in trading account profits relate to the embedded derivative in structured liabilities and are offset by gains (losses) on derivatives and securities that hedge these liabilities. For more information on the adoption of new accounting guidance relating to DVA on structured liabilities, see Note 1 – Summary of Significant Accounting Principles.

(4) For the cumulative impact of changes in the Corporation's own credit spreads and the amount recognized in OCI, see Note 12 – Accumulated Other Comprehensive Income (Loss). For more information on how the Corporation's own credit spread is determined, see Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## Gains (Losses) Related to Borrower-specific Credit Risk for Assets Accounted for Under the Fair Value Option

	Three Months Ended September 30 2016	Three Months Ended September 30 2015	Nine Months Ended September 30 2016	Nine Months Ended September 30 2015
(Dollars in millions)				
Loans reported as trading account assets	\$ —	\$ 14	\$ 5	\$ 44
Consumer and commercial loans	14	(88 )	(25)	(100)
Loans held-for-sale	(10)	8	(6 )	58

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## NOTE 16 – Fair Value of Financial Instruments

Financial instruments are classified within the fair value hierarchy using the methodologies described in Note 14 – Fair Value Measurements. The following disclosures include financial instruments where only a portion of the ending balance at September 30, 2016 and December 31, 2015 was carried at fair value on the Consolidated Balance Sheet. For more information on these financial instruments and their valuation methodologies, see Note 20 – Fair Value Measurements and Note 22 – Fair Value of Financial Instruments to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## Fair Value of Financial Instruments

The carrying values and fair values by fair value hierarchy of certain financial instruments where only a portion of the ending balance was carried at fair value at September 30, 2016 and December 31, 2015 are presented in the table below.

## Fair Value of Financial Instruments

(Dollars in millions)	September 30, 2016				December 31, 2015			
	Carrying Value	Fair Value		Total	Carrying Value	Fair Value		Total
		Level 2	Level 3			Level 2	Level 3	
<b>Financial assets</b>								
Loans	\$872,148	\$74,098	\$817,756	\$891,854	\$863,561	\$70,223	\$805,371	\$875,594
Loans held-for-sale	10,586	9,627	959	10,586	7,453	5,347	2,106	7,453
<b>Financial liabilities</b>								
Deposits	\$1,232,895	\$1,233,110	\$—	\$1,233,110	\$1,197,259	\$1,197,577	\$—	\$1,197,577
Long-term debt	225,136	227,794	1,934	229,728	236,764	239,596	1,513	241,109

## Commercial Unfunded Lending Commitments

Fair values were generally determined using a discounted cash flow valuation approach which is applied using market-based CDS or internally developed benchmark credit curves. The Corporation accounts for certain loan commitments under the fair value option.

The carrying values and fair values of the Corporation's commercial unfunded lending commitments were \$985 million and \$5.0 billion at September 30, 2016, and \$1.3 billion and \$6.3 billion at December 31, 2015. Commercial unfunded lending commitments are primarily classified as Level 3. The carrying value of these commitments is classified in accrued expenses and other liabilities.

The Corporation does not estimate the fair values of consumer unfunded lending commitments because, in many instances, the Corporation can reduce or cancel these commitments by providing notice to the borrower. For more information on commitments, see Note 10 – Commitments and Contingencies.

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## NOTE 17 – Mortgage Servicing Rights

The Corporation accounts for consumer MSR at fair value, with changes in fair value primarily recorded in mortgage banking income in the Consolidated Statement of Income. The Corporation manages the risk in these MSRs with derivatives such as options and interest rate swaps, which are not designated as accounting hedges, as well as securities including MBS and U.S. Treasury securities. The securities used to manage the risk in the MSRs are classified in other assets, with changes in the fair value of the securities and the related interest income recorded in mortgage banking income.

The table below presents activity for residential mortgage and home equity MSRs for the three and nine months ended September 30, 2016 and 2015.

## Rollforward of Mortgage Servicing Rights

	Three Months		Nine Months	
	Ended		Ended	
	September 30		September 30	
(Dollars in millions)	2016	2015	2016	2015
Balance, beginning of period	\$2,269	\$3,521	\$3,087	\$3,530
Additions	101	185	307	568
Sales	—	(87 )	—	(399 )
Amortization of expected cash flows <sup>(1)</sup>	(206 )	(213 )	(622 )	(666 )
Changes in fair value due to changes in inputs and assumptions <sup>(2)</sup>	313	(363 )	(295 )	10
Balance, September 30 <sup>(3)</sup>	\$2,477	\$3,043	\$2,477	\$3,043
Mortgage loans serviced for investors (in billions)	\$355	\$408	\$355	\$408

<sup>(1)</sup> Represents the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

These amounts reflect the changes in modeled MSR fair value due to observed changes in interest rates, volatility,

<sup>(2)</sup> spreads, and the shape of the forward swap curve; periodic adjustments to valuation based on third-party price discovery; and periodic adjustments to the valuation model and other cash flow assumptions.

At September 30, 2016, includes the \$1.8 billion core MSR portfolio held in Consumer Banking, the \$226 million

<sup>(3)</sup> non-core MSR portfolio held in All Other and the \$466 million non-U.S. MSR portfolio held in Global Markets compared to \$2.3 billion, \$418 million and \$344 million at September 30, 2015, respectively.

The Corporation revised certain MSR valuation assumptions during the three months ended September 30, 2016, resulting in a net \$282 million increase in fair value, which is included within “Changes in fair value due to changes in inputs and assumptions” in the table above. The increase was primarily driven by changes in prepayment assumptions based on recent observed differences between modeled and actual prepayment behavior, which had the impact of slowing the weighted-average rate of projected prepayments, thus increasing both the weighted-average life of the MSRs and the yield that a market participant would require to buy the MSR.

The Corporation primarily uses an option-adjusted spread (OAS) valuation approach, which factors in prepayment risk to determine the fair value of MSRs. This approach consists of projecting servicing cash flows under multiple interest rate scenarios and discounting these cash flows using risk-adjusted discount rates. Weighted-average OAS levels for MSRs associated with fixed and adjustable-rate loans were 9.90 percent and 12.29 percent at September 30, 2016 and 4.62 percent and 7.61 percent at December 31, 2015.

Weighted-average lives of the MSRs associated with fixed and adjustable-rate loans were 4.70 years and 3.44 years at September 30, 2016 and 4.46 years and 3.43 years at December 31, 2015. The weighted-average life is not an input in the valuation model, but is a product of changes in both market rates of interest and model and other cash flow

assumptions. The weighted-average life represents the average period of time that the MSR's cash flows are expected to be received. Absent other changes, an increase (decrease) to the weighted-average life would generally result in an increase (decrease) in the fair value of the MSRs.

The weighted-average lives and fair value of MSRs are sensitive to changes in modeled assumptions. For example, a 10 percent or 20 percent decrease in prepayment rates could result in an increase in fair value of \$125 million or \$262 million, while a 10 percent or 20 percent increase in prepayment rates could result in a decrease in fair value of \$113 million or \$217 million. A 100 basis points (bps) or 200 bps decrease in OAS levels could result in an increase in fair value of \$80 million or \$167 million, while a 100 bps or 200 bps increase in OAS levels could result in a decrease in fair value of \$75 million or \$145 million. These sensitivities are hypothetical and actual amounts may vary materially. As the amounts indicate, changes in fair value based on variations in assumptions generally cannot be extrapolated because the relationship of the change in assumption to the change in fair value may not be linear. Also, the effect of a variation in a particular assumption on the fair value of MSRs that continue to be held by the Corporation is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities. In addition, these sensitivities do not reflect any hedge strategies that may be undertaken to mitigate such risk.

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## NOTE 18 – Business Segment Information

The Corporation reports its results of operations through the following four business segments: Consumer Banking, GWIM, Global Banking and Global Markets, with the remaining operations recorded in All Other. For additional information, see Note 24 – Business Segment Information to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K. The table below presents net income (loss) and the components thereto (with net interest income on an FTE basis) for the three and nine months ended September 30, 2016 and 2015, and total assets at September 30, 2016 and 2015 for each business segment, as well as All Other.

## Results of Business Segments and All Other

At and for the Three Months Ended September 30

(Dollars in millions)	Total Corporation <sup>(1)</sup>		Consumer Banking	
	2016	2015	2016	2015
Net interest income (FTE basis)	\$10,429	\$10,127	\$5,290	\$5,093
Noninterest income	11,434	11,092	2,678	2,888
Total revenue, net of interest expense (FTE basis)	21,863	21,219	7,968	7,981
Provision for credit losses	850	806	698	523
Noninterest expense	13,481	13,939	4,371	4,711
Income before income taxes (FTE basis)	7,532	6,474	2,899	2,747
Income tax expense (FTE basis)	2,577	1,855	1,086	990
Net income	\$4,955	\$4,619	\$1,813	\$1,757
Period-end total assets	\$2,195,314	\$2,152,962	\$687,247	\$625,158

	Global Wealth & Investment Management		Global Banking	
	2016	2015	2016	2015
Net interest income (FTE basis)	\$1,394	\$1,360	\$2,470	\$2,315
Noninterest income	2,985	3,093	2,278	2,021
Total revenue, net of interest expense (FTE basis)	4,379	4,453	4,748	4,336
Provision for credit losses	7	(2)	118	181
Noninterest expense	3,257	3,470	2,151	2,161
Income before income taxes (FTE basis)	1,115	985	2,479	1,994
Income tax expense (FTE basis)	418	353	926	716
Net income	\$697	\$632	\$1,553	\$1,278
Period-end total assets	\$289,795	\$279,237	\$397,795	\$376,379

	Global Markets		All Other	
	2016	2015	2016	2015
Net interest income (FTE basis)	\$1,119	\$1,094	\$156	\$265
Noninterest income	3,240	2,656	253	434
Total revenue, net of interest expense (FTE basis)	4,359	3,750	409	699
Provision for credit losses	19	42	8	62
Noninterest expense	2,658	2,697	1,044	900
Income (loss) before income taxes (FTE basis)	1,682	1,011	(643)	(263)
Income tax expense (benefit) (FTE basis)	608	211	(461)	(415)
Net income (loss)	\$1,074	\$800	\$(182)	\$152
Period-end total assets	\$595,165	\$576,461	\$225,312	\$295,727

<sup>(1)</sup> There were no material intersegment revenues.





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At and for the Nine Months Ended September 30

(Dollars in millions)	Total Corporation <sup>(1)</sup>		Consumer Banking	
	2016	2015	2016	2015
Net interest income (FTE basis)	\$31,470	\$29,936	\$15,825	\$15,199
Noninterest income	32,907	34,111	7,795	8,314
Total revenue, net of interest expense (FTE basis)	64,377	64,047	23,620	23,513
Provision for credit losses	2,823	2,351	1,955	1,662
Noninterest expense	41,790	43,724	13,324	14,079
Income before income taxes (FTE basis)	19,764	17,972	8,341	7,772
Income tax expense (FTE basis)	6,554	5,420	3,088	2,859
Net income	\$13,210	\$12,552	\$5,253	\$4,913
Period-end total assets	\$2,195,314	\$2,152,962	\$687,247	\$625,158
	Global Wealth & Investment Management		Global Banking	
	2016	2015	2016	2015
Net interest income (FTE basis)	\$4,310	\$4,081	\$7,439	\$6,788
Noninterest income	8,963	9,475	6,457	6,272
Total revenue, net of interest expense (FTE basis)	13,273	13,556	13,896	13,060
Provision for credit losses	46	36	870	454
Noninterest expense	9,822	10,446	6,449	6,396
Income before income taxes (FTE basis)	3,405	3,074	6,577	6,210
Income tax expense (FTE basis)	1,267	1,130	2,435	2,286
Net income	\$2,138	\$1,944	\$4,142	\$3,924
Period-end total assets	\$289,795	\$279,237	\$397,795	\$376,379
	Global Markets		All Other	
	2016	2015	2016	2015
Net interest income (FTE basis)	\$3,391	\$3,059	\$505	\$809
Noninterest income	9,227	8,837	465	1,213
Total revenue, net of interest expense (FTE basis)	12,618	11,896	970	2,022
Provision for credit losses	23	69	(71	) 130
Noninterest expense	7,690	8,606	4,505	4,197
Income (loss) before income taxes (FTE basis)	4,905	3,221	(3,464	) (2,305
Income tax expense (benefit) (FTE basis)	1,746	968	(1,982	) (1,823
Net income (loss)	\$3,159	\$2,253	\$(1,482	) \$(482
Period-end total assets	\$595,165	\$576,461	\$225,312	\$295,727

<sup>(1)</sup> There were no material intersegment revenues.

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The table below presents a reconciliation of the four business segments' total revenue, net of interest expense, on an FTE basis, and net income to the Consolidated Statement of Income, and total assets to the Consolidated Balance Sheet. The adjustments presented in the table below include consolidated income, expense and asset amounts not specifically allocated to individual business segments.

## Business Segment Reconciliations

(Dollars in millions)	Three Months Ended		Nine Months Ended	
	September 30		September 30	
	2016	2015	2016	2015
Segments' total revenue, net of interest expense (FTE basis)	\$21,454	\$20,520	\$63,407	\$62,025
Adjustments:				
ALM activities	(46 )	336	(20 )	453
Liquidating businesses and other	455	363	990	1,569
FTE basis adjustment	(228 )	(227 )	(666 )	(664 )
Consolidated revenue, net of interest expense	\$21,635	\$20,992	\$63,711	\$63,383
Segments' total net income	\$5,137	\$4,467	\$14,692	\$13,034
Adjustments, net-of-taxes:				
ALM activities	(138 )	71	(349 )	(140 )
Liquidating businesses and other	(44 )	81	(1,133 )	(342 )
Consolidated net income	\$4,955	\$4,619	\$13,210	\$12,552
			September 30	
			2016	2015
Segments' total assets			\$1,970,002	\$1,857,235
Adjustments:				
ALM activities, including securities portfolio			616,804	610,525
Liquidating businesses and other			116,989	147,140
Elimination of segment asset allocations to match liabilities			(508,481 )	(461,938 )
Consolidated total assets			\$2,195,314	\$2,152,962

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Glossary

Alt-A Mortgage – A type of U.S. mortgage that is considered riskier than A-paper, or "prime," and less risky than "subprime," the riskiest category. Alt-A interest rates therefore tend to be between those of prime and subprime consumer real estate loans. Typically, Alt-A mortgages are characterized by borrowers with less than full documentation, lower credit scores and higher LTVs.

Assets in Custody – Consist largely of custodial and non-discretionary trust assets excluding brokerage assets administered for clients. Trust assets encompass a broad range of asset types including real estate, private company ownership interest, personal property and investments.

Assets Under Management (AUM) – The total market value of assets under the investment advisory and/or discretion of GWIM which generate asset management fees based on a percentage of the assets' market values. AUM reflects assets that are generally managed for institutional, high net worth and retail clients, and are distributed through various investment products including mutual funds, other commingled vehicles and separate accounts.

Banking Book – All on- and off-balance sheet financial instruments of the Corporation except for those positions that are held for trading purposes.

Carrying Value (with respect to loans) – The amount at which a loan is recorded on the balance sheet. For loans recorded at amortized cost, carrying value is the unpaid principal balance net of unamortized deferred loan origination fees and costs and unamortized purchase premiums or discounts, less net charge-offs and interest payments applied as a reduction of principal under the cost recovery method for loans that have been on nonaccrual status. For PCI loans, the carrying value equals fair value upon acquisition adjusted for subsequent cash collections and yield accreted to date. For credit card loans, the carrying value also includes interest that has been billed to the customer. For loans classified as held-for-sale, carrying value is the lower of carrying value as described in the sentences above, or fair value. For loans for which we have elected the fair value option, the carrying value is fair value.

Client Brokerage Assets – Include client assets which are held in brokerage accounts. This includes non-discretionary brokerage and fee-based assets which generate brokerage income and asset management fee revenue.

Committed Credit Exposure – Includes any funded portion of a facility plus the unfunded portion of a facility on which the lender is legally bound to advance funds during a specified period under prescribed conditions.

Credit Derivatives – Contractual agreements that provide protection against a credit event on one or more referenced obligations. The nature of a credit event is established by the protection purchaser and the protection seller at the inception of the transaction, and such events generally include bankruptcy or insolvency of the referenced credit entity, failure to meet payment obligations when due, as well as acceleration of indebtedness and payment repudiation or moratorium. The purchaser of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of such a credit event. A credit default swap is a type of a credit derivative.

Credit Valuation Adjustment (CVA) – A portfolio adjustment required to properly reflect the counterparty credit risk exposure as part of the fair value of derivative instruments.

Debit Valuation Adjustment (DVA) – A portfolio adjustment required to properly reflect the Corporation's own credit risk exposure as part of the fair value of derivative instruments and/or structured liabilities.

Funding Valuation Adjustment (FVA) – A portfolio adjustment required to include funding costs on uncollateralized derivatives and derivatives where the Corporation is not permitted to use the collateral it receives.

Interest Rate Lock Commitment (IRLC) – Commitment with a loan applicant in which the loan terms, including interest rate and price, are guaranteed for a designated period of time subject to credit approval.

Letter of Credit – A document issued on behalf of a customer to a third party promising to pay the third party upon presentation of specified documents. A letter of credit effectively substitutes the issuer's credit for that of the customer.

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**Loan-to-value (LTV)** – A commonly used credit quality metric. LTV is calculated as the outstanding carrying value of the loan divided by the estimated value of the property securing the loan. Estimated property values are generally determined through the use of automated valuation models (AVMs) or the CoreLogic Case-Shiller Index. An AVM is a tool that estimates the value of a property by reference to large volumes of market data including sales of comparable properties and price trends specific to the MSA in which the property being valued is located. CoreLogic Case-Shiller is a widely used index based on data from repeat sales of single family homes. CoreLogic Case-Shiller indexed-based values are reported on a three-month or one-quarter lag.

**Margin Receivable** – An extension of credit secured by eligible securities in certain brokerage accounts.

**Matched Book** – Repurchase and resale agreements or securities borrowed and loaned transactions where the overall asset and liability position is similar in size and/or maturity. Generally, these are entered into to accommodate customers where the Corporation earns the interest rate spread.

**Mortgage Servicing Rights (MSR)** – The right to service a mortgage loan when the underlying loan is sold or securitized. Servicing includes collections for principal, interest and escrow payments from borrowers and accounting for and remitting principal and interest payments to investors.

**Net Interest Yield** – Net interest income divided by average total interest-earning assets.

**Nonperforming Loans and Leases** – Includes loans and leases that have been placed on nonaccrual status, including nonaccruing loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties. Loans accounted for under the fair value option, PCI loans and LHFS are not reported as nonperforming loans and leases. Credit card receivables, residential mortgage loans that are insured by the FHA or through long-term credit protection agreements with FNMA and FHLMC (fully-insured loan portfolio) and certain other consumer loans are not placed on nonaccrual status and are, therefore, not reported as nonperforming loans and leases.

**Prompt Corrective Action (PCA)** – A framework established by the U.S. banking regulators requiring banks to maintain certain levels of regulatory capital ratios, comprised of five categories of capitalization: "well capitalized," "adequately capitalized," "undercapitalized," "significantly undercapitalized" and "critically undercapitalized." Insured depository institutions that fail to meet certain of these capital levels are subject to increasingly strict limits on their activities, including their ability to make capital distributions, pay management compensation, grow assets and take other actions.

**Purchased Credit-impaired (PCI) Loan** – A loan purchased as an individual loan, in a portfolio of loans or in a business combination with evidence of deterioration in credit quality since origination for which it is probable, upon acquisition, that the investor will be unable to collect all contractually required payments. These loans are recorded at fair value upon acquisition.

**Subprime Loans** – Although a standard industry definition for subprime loans (including subprime mortgage loans) does not exist, the Corporation defines subprime loans as specific product offerings for higher risk borrowers, including individuals with one or a combination of high credit risk factors, such as low FICO scores, high debt to income ratios and inferior payment history.

**Troubled Debt Restructurings (TDRs)** – Loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties. Certain consumer loans for which a binding offer to restructure has been extended are also classified as TDRs. Concessions could include a reduction in the interest rate to a rate that is below market on the loan, payment extensions, forgiveness of principal, forbearance, loans discharged in bankruptcy or other actions intended to maximize collection. Secured consumer loans that have been discharged in Chapter 7 bankruptcy and have not been reaffirmed by the borrower are classified as TDRs at the time of discharge from bankruptcy.

**Value-at-Risk (VaR)** – VaR is a model that simulates the value of a portfolio under a range of hypothetical scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss the portfolio is expected to experience with a given confidence level based on historical data. A VaR model is an effective tool in estimating ranges of potential gains and losses on our trading portfolios.



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## Acronyms

ABS	Asset-backed securities
AFS	Available-for-sale
ALM	Asset and liability management
AUM	Assets under management
AVM	Automated valuation model
BANA	Bank of America, National Association
BHC	Bank holding company
bps	basis points
CCAR	Comprehensive Capital Analysis and Review
CDO	Collateralized debt obligation
CDS	Credit default swap
CFE	Collateralized financing entity
CLO	Collateralized loan obligation
CLTV	Combined loan-to-value
CVA	Credit valuation adjustment
DIF	Deposit Insurance Fund
DoJ	U.S. Department of Justice
DPC	Derivative product company
DVA	Debit valuation adjustment
EAD	Exposure at default
EMV	Europay, Mastercard and Visa
EPS	Earnings per common share
ERC	Enterprise Risk Committee
FASB	Financial Accounting Standards Board
FCA	Financial Conduct Authority
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration
FHLB	Federal Home Loan Bank
FHLMC	Freddie Mac
FICC	Fixed-income, currencies and commodities
FICO	Fair Isaac Corporation (credit score)
FNMA	Fannie Mae
FOMC	Federal Open Market Committee
FTE	Fully taxable-equivalent
FVA	Funding valuation adjustment
GAAP	Accounting principles generally accepted in the United States of America
GLS	Global Liquidity Sources
GNMA	Government National Mortgage Association
GPI	Global Principal Investments
GSE	Government-sponsored enterprise
G-SIB	Global systemically important bank
GWIM	Global Wealth & Investment Management
HELOC	Home equity line of credit
HQLA	High Quality Liquid Assets

HTM	Held-to-maturity
ICAAP	Internal Capital Adequacy Assessment Process
IMM	Internal models methodology
IRLC	Interest rate lock commitment
ISDA	International Swaps and Derivatives Association, Inc.
LCR	Liquidity Coverage Ratio
LGD	Loss-given default
LHFS	Loans held-for-sale
LIBOR	London InterBank Offered Rate
LTV	Loan-to-value
MBS	Mortgage-backed securities
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
MI	Mortgage insurance
MLGWM	Merrill Lynch Global Wealth Management
MLI	Merrill Lynch International
MLPCC	Merrill Lynch Professional Clearing Corp
MLPF&S	Merrill Lynch, Pierce, Fenner & Smith, Incorporated
MSA	Metropolitan Statistical Area
MSR	Mortgage servicing rights
NPR	Notice of proposed rulemaking
NSFR	Net Stable Funding Ratio
OAS	Option-adjusted spread
OCI	Other comprehensive income
OTC	Over-the-counter
OTTI	Other-than-temporary impairment
PCA	Prompt Corrective Action
PCI	Purchased credit-impaired
PPI	Payment protection insurance
RMBS	Residential mortgage-backed securities
RSU	Restricted stock unit
SBLC	Standby letter of credit
SCCL	Single-Counterparty Credit Limits
SEC	Securities and Exchange Commission
SLR	Supplementary leverage ratio
TDR	Troubled debt restructuring
TLAC	Total loss-absorbing capacity
VA	U.S. Department of Veterans Affairs
VaR	Value-at-Risk
VIE	Variable interest entity

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## Part II. OTHER INFORMATION

## Item 1. Legal Proceedings

See Litigation and Regulatory Matters in Note 10 – Commitments and Contingencies to the Consolidated Financial Statements, which is incorporated by reference in this Item 1, for litigation and regulatory disclosure that supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2015 Annual Report on Form 10-K.

## Item 1A. Risk Factors

There are no material changes from the risk factors set forth under Part 1, Item 1A. Risk Factors of the Corporation's 2015 Annual Report on Form 10-K, as supplemented by Item 1A. Risk Factors of the Corporation's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016.

## Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The table below presents share repurchase activity for the three months ended September 30, 2016. The primary source of funds for cash distributions by the Corporation to its shareholders is dividends received from its banking subsidiaries. Each of the banking subsidiaries is subject to various regulatory policies and requirements relating to the payment of dividends, including requirements to maintain capital above regulatory minimums. All of the Corporation's preferred stock outstanding has preference over the Corporation's common stock with respect to the payment of dividends.

(Dollars in millions, except per share information; shares in thousands)	Common		Shares	Remaining
	Shares Repurchased <sup>(1)</sup>	Weighted-Average Per Share Price	Purchased as Part of Publicly Announced Programs	Buyback Authority Amounts
July 1 - 31, 2016	12,001	\$ 14.35	12,000	\$ 4,828
August 1 - 31, 2016	65,601	14.97	65,568	3,846
September 1 - 30, 2016	15,430	15.97	15,430	3,600
Three Months Ended September 30, 2016	93,032	15.05		

Includes shares of the Corporation's common stock acquired by the Corporation in connection with satisfaction of <sup>(1)</sup> tax withholding obligations on vested restricted stock or restricted stock units and certain forfeitures and terminations of employment-related awards under equity incentive plans.

The Corporation's 2016 CCAR capital plan included a request to repurchase \$5.0 billion of common stock over four quarters beginning in the third quarter of 2016 and to repurchase common stock to offset the dilution resulting from certain equity-based compensation awards. On June 29, 2016, following the Federal Reserve's non-objection <sup>(2)</sup> to the Corporation's 2016 CCAR capital plan, the Board authorized this common stock repurchase beginning July 1, 2016. During the three months ended September 30, 2016, pursuant to the Board's authorization, the Corporation repurchased \$1.4 billion of common stock, which includes common stock to offset equity-based compensation awards. For additional information, see Capital Management – CCAR and Capital Planning on page 40 and Note 11 – Shareholders' Equity to the Consolidated Financial Statements.

The Corporation did not have any unregistered sales of its equity securities during the three months ended September 30, 2016.



## Capital Covenants

On August 15, 2016, Bank of America Corporation (the “Corporation”) completed the redemption of (i) \$500 million aggregate liquidation amount of capital securities of Countrywide Capital IV (the “Trust”), and the related redemption and cancellation of the underlying 6.75% Junior Subordinated Deferrable Debentures, due April 1, 2033 (the “6.75% Junior Subordinated Debentures”), originally issued by Countrywide Financial Corporation to and held by the Trust and (ii) \$114,871,000 aggregate principal amount of the Corporation’s 6.35% Subordinated InterNotes due December 2037 (the “6.35% Notes”). As a result of these redemptions, the Corporation redesignated the series of covered debt benefiting from the replacement capital covenant, executed November 8, 2006 in connection with the issuance by Countrywide Capital V of its 7% Capital Securities, and the replacement capital covenant, executed February 16, 2007 in connection with the issuance by BAC Capital Trust XIV of its 5.63% Fixed-to-Floating Rate Preferred Hybrid Income Term Securities (together, the “Replacement Capital Covenants”). Effective as of August 15, 2016, the 6.75% Junior Subordinated Debentures and the 6.35% Notes ceased being, and the Corporation’s 4.750% Subordinated Notes due April 2045 became, the covered debt with respect to the Replacement Capital Covenants.

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Item 6. Exhibits

Exhibit 3(a)	Amended and Restated Certificate of Incorporation of the Corporation, as in effect on the date hereof, incorporated by reference to Exhibit 3(a) of the Corporation's Quarterly Report on Form 10-Q (File No. 1-6523) for the quarterly period ended March 31, 2016 filed on May 2, 2016
Exhibit 3(b)	Amended and Restated Bylaws of the Corporation, as in effect on the date hereof, incorporated by reference to Exhibit 3.1 of the Corporation's Current Report on Form 8-K (File No. 1-6523) filed on March 20, 2015
Exhibit 11	Earnings Per Share Computation – included in Note 13 – Earnings Per Common Share to the Consolidated Financial Statements <sup>(1)</sup>
Exhibit 12	Ratio of Earnings to Fixed Charges <sup>(1)</sup> Ratio of Earnings to Fixed Charges and Preferred Dividends <sup>(1)</sup>
Exhibit 18	Preferability Letter from PricewaterhouseCoopers, LLP for Accounting Principle Change <sup>(1)</sup>
Exhibit 31(a)	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
Exhibit 31(b)	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
Exhibit 32(a)	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
Exhibit 32(b)	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
Exhibit 101.INS	XBRL Instance Document <sup>(1)</sup>
Exhibit 101.SCH	XBRL Taxonomy Extension Schema Document <sup>(1)</sup>
Exhibit 101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document <sup>(1)</sup>
Exhibit 101.LAB	XBRL Taxonomy Extension Label Linkbase Document <sup>(1)</sup>
Exhibit 101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document <sup>(1)</sup>
Exhibit 101.DEF	XBRL Taxonomy Extension Definitions Linkbase Document <sup>(1)</sup>

<sup>(1)</sup> Filed herewith

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Bank of America  
Corporation  
Registrant

Date: November 1, 2016

/s/ Rudolf  
A. Bless  
Rudolf A.  
Bless  
Chief  
Accounting  
Officer

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Bank of America Corporation  
 Form 10-Q  
 Index to Exhibits

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