BANK OF AMERICA CORP /DE/
Form 10-Q
October 30, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
(Mark One)
[ü] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Quarterly Period Ended September 30, 2017
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 ü 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 ü No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act (check one).

Large accelerated filer ü	Accelerated filer	Non-accelerated filer (do not check if a smaller reporting company)	Smaller reporting company

Emerging growth company
Yes No ü
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the

Exchange Act.
Yes No
Indicate by check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2).
Yes No ü
On October 27, 2017, there were 10,430,613,675 shares of Bank of America Corporation Common Stock outstanding.

Bank of America Corporation and Subsidiaries
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Part I. Financial Information

Part II. Other Information

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Bank of America Corporation (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,” “belie “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 under Item 1A. Risk Factors of our 2016 Annual Report on Form 10-K and in any of the Corporation’s subsequent Securities and Exchange Commission filings: potential claims, damages, penalties, fines and reputational damage resulting from pending or future litigation, regulatory proceedings and enforcement actions, including inquiries into our retail sales practices, and the possibility that amounts may be in excess of the Corporation’s recorded liability and estimated range of possible loss for litigation exposures; 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; the Corporation’s ability to resolve representations and warranties repurchase and related claims, including claims brought by investors or trustees seeking to avoid the statute of limitations for repurchase claims; 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, currency exchange rates

and economic conditions; the impact on the Corporation's business, financial condition and results of operations of a potential higher interest rate environment; the possibility that future credit losses may be higher than currently expected due to changes in economic assumptions, customer behavior, adverse developments with respect to U.S. or global economic conditions, and other uncertainties; 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; the Corporation's ability to achieve its expense targets or net interest income expectations or other projections or expectations; 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 approval of our internal models methodology for calculating counterparty credit risk for derivatives; the potential impact of total loss-absorbing capacity requirements; potential adverse changes to our global systemically important bank surcharge; the potential impact of Federal Reserve actions on the Corporation’s capital plans; the possible impact of the Corporation's failure to remediate shortcomings identified by banking regulators in the Corporation's Resolution Plan or failure to take actions identified therein; 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, Federal Deposit

Insurance Corporation 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 planned 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.

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, 2017, the Corporation had approximately $2.3 trillion in assets and a headcount of approximately 210,000 employees. Headcount remained relatively unchanged since December 31, 2016.

As of September 30, 2017, 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 83 percent of the U.S. population, and we serve approximately 47 million consumer and small business relationships with approximately 4,500 retail financial centers, approximately 16,000 ATMs, and leading digital banking platforms (www.bankofamerica.com) with approximately 34 million active users, including approximately 24 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 $2.7 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 2017 Economic and Business Environment

U.S. macroeconomic trends in the third quarter were characterized by a softening in economic growth and low inflation. GDP advanced at a slower pace than the previous quarter. At the same time, inflation remained subdued overall despite some energy-related pressure stemming from the hurricanes that impacted the southern U.S.

Despite sustained growth in the third quarter, the hurricanes added uncertainty to economic forecasts and distorted economic data releases. As a result of the hurricanes, there was an estimated 0.1 to 0.5 percent reduction from annualized GDP growth. Consumer spending slowed in August but recovered, especially vehicle sales, the following month. Business investment in equipment remained buoyant. While nonfarm payroll growth decelerated, the unemployment rate remained low. Despite tight labor market conditions, wage gains were modest.

The Federal Reserve, as expected, kept its target federal funds rate corridor at 1 to 1.25 percent, while announcing that balance sheet normalization would begin in October. U.S. equities rose in the quarter, in part due to improvement in corporate earnings and despite the realization that domestic fiscal policy changes will likely take longer than previously expected. Despite a late rally, the U.S. dollar index fell primarily on the strength of the euro. Amid a weaker dollar, gold and oil prices both rose. The U.S. yield curve flattened modestly while interest rates increased.

Abroad, eurozone recovery remained robust in the third quarter, maintaining momentum following its best quarter in two years. The more robust economic momentum has failed to translate into stronger inflationary pressures, which remained depressed over the quarter. As a result, the European Central Bank remained cautious about the outlook for monetary policy and it has been carefully evaluating how to extend the ongoing quantitative easing program into next year.

Many survey indicators suggest that the subdued momentum from the first half of the year in the United Kingdom (U.K.) economy has extended into the third quarter. At the same time, inflation continued in an upward trend and reached the highest level since 2012, well above the Bank of England target, driven by the pass-through from the sterling depreciation that followed the Brexit referendum.

In Japan, business surveys suggest that moderate economic momentum remained intact in the third quarter. In China, the service sector remained a key driver of economic growth. The yuan had a volatile third quarter, reaching a one-year high in September with Chinese foreign exchange reserves rising steadily over the quarter.

Recent Events

Capital Management

During the third quarter of 2017, we repurchased approximately $3.0 billion of common stock pursuant to the Board's 2017 repurchase authorization of $12.9 billion announced on June 28, 2017. For additional information, see Capital Management on page 28. On July 26, 2017, the Board declared a quarterly common stock dividend of $0.12 per share, payable on September 29, 2017 to shareholders of record as of September 1, 2017.

Series T Preferred Stock

In connection with an investment in the Corporation’s Series T 6% Non-cumulative preferred stock (Series T) in 2011, the Series T holders also received warrants to purchase 700 million shares of the Corporation’s common stock at an exercise price of $7.142857 per share. On August 24, 2017, the Series T holders exercised the warrants and acquired the 700 million shares of our common stock using the Series T preferred stock as consideration for the exercise price, which increased the number of common shares outstanding, but had no effect on diluted earnings per share as this conversion had been included in the Corporation’s diluted earnings per share calculation under the applicable accounting guidance. The carrying amount of the Series T was $2.9 billion and, upon conversion, was recorded as additional paid-in capital, increasing the Common equity tier 1 capital ratio by 20 basis points.

Selected Financial Data

Table 1 provides selected consolidated financial data for the three and nine months ended September 30, 2017 and 2016, and at September 30, 2017 and December 31, 2016.

Table 1 Selected Financial Data

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions, except per share information)	2017	2016	2017	2016
Income statement				
Revenue, net of interest expense	$21,839	$21,635	$66,916	$63,711
Net income	5,587	4,955	15,712	13,210
Diluted earnings per common share	0.48	0.41	1.35	1.10
Dividends paid per common share	0.12	0.075	0.27	0.175
Performance ratios				
Return on average assets	0.98 %	0.90 %	0.93 %	0.81 %
Return on average common shareholders' equity	8.14	7.27	7.81	6.61
Return on average tangible common shareholders’ equity[(1)]	11.32	10.28	10.95	9.40
Efficiency ratio	60.16	62.31	62.34	65.59

	September 30 2017	December 31 2016
Balance sheet		
Total loans and leases	$927,117	$906,683
Total assets	2,283,896	2,187,702
Total deposits	1,284,417	1,260,934
Total common shareholders’ equity	250,136	241,620
Total shareholders’ equity	272,459	266,840

(1) Return on average tangible common shareholders' equity is a non-GAAP financial measure. For additional information and a corresponding reconciliation to accounting principles generally accepted in the United States of America (GAAP) financial measures, see Non-GAAP Reconciliations on page 67.

Financial Highlights

Net income was $5.6 billion and $15.7 billion, or $0.48 and $1.35 per diluted share for the three and nine months ended September 30, 2017 compared to $5.0 billion and $13.2 billion, or $0.41 and $1.10 per diluted share for the same periods in 2016. The results for the three- and nine-month periods compared to the same periods in 2016 were primarily driven by higher revenue, lower provision for credit losses and noninterest expense.

Total assets increased $96.2 billion from December 31, 2016 to $2.3 trillion at September 30, 2017 due to higher trading account assets primarily driven by additional inventory in fixed-income, currencies and commodities (FICC) to meet expected client demand, and increased client financing activities in equities, growth in cash and cash equivalents primarily due to an increase in deposits, as well as higher loans and leases and securities

borrowed or purchased under agreements to resell. These increases were partially offset by the impact of the sale of the non-U.S. consumer credit card business to a third party in the second quarter of 2017. Total liabilities increased $90.6 billion from December 31, 2016 to $2.0 trillion at September 30, 2017 primarily driven by higher deposits due to strong organic growth, an increase in trading account liabilities, higher securities loaned or sold under agreements to repurchase due to increased matched-book activity, as well as increases in long-term debt and accrued expenses and other liabilities. Shareholders' equity increased $5.6 billion from December 31, 2016 primarily due to net income, partially offset by returns of capital to shareholders of $12.0 billion through common stock repurchases and common and preferred stock dividends.

Table 2 Summary Income Statement

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Net interest income	$11,161	$10,201	$33,205	$30,804
Noninterest income	10,678	11,434	33,711	32,907
Total revenue, net of interest expense	21,839	21,635	66,916	63,711
Provision for credit losses	834	850	2,395	2,823
Noninterest expense	13,139	13,481	41,713	41,790
Income before income taxes	7,866	7,304	22,808	19,098
Income tax expense	2,279	2,349	7,096	5,888
Net income	5,587	4,955	15,712	13,210
Preferred stock dividends	465	503	1,328	1,321
Net income applicable to common shareholders	$5,122	$4,452	$14,384	$11,889
Per common share information				
Earnings	$0.50	$0.43	$1.42	$1.15
Diluted earnings	0.48	0.41	1.35	1.10

Net Interest Income

Net interest income increased $960 million to $11.2 billion, and $2.4 billion to $33.2 billion for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The net interest yield increased 13 basis points (bps) to 2.31 percent, and 11 bps to 2.32 percent. These increases were primarily driven by the benefits from higher interest rates and loan and deposit growth, partially offset by the decline resulting from the sale of the non-U.S. consumer credit card business in the second quarter of 2017. For more information regarding interest rate risk management, see Interest Rate Risk Management for the Banking Book on page 63.

Noninterest Income

Table 3 Noninterest Income

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Card income	$1,429	$1,455	$4,347	$4,349
Service charges	1,968	1,952	5,863	5,660
Investment and brokerage services	3,303	3,160	9,882	9,543
Investment banking income	1,477	1,458	4,593	4,019
Trading account profits	1,837	2,141	6,124	5,821
Mortgage banking income	(20)	589	332	1,334
Gains on sales of debt securities	125	51	278	490
Other income	559	628	2,292	1,691
Total noninterest income	$10,678	$11,434	$33,711	$32,907

Noninterest income decreased $756 million to $10.7 billion, and increased $804 million to $33.7 billion for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The following highlights the more significant changes.

Service charges remained relatively unchanged for the three-month period and increased $203 million for the nine-month period with the increase primarily driven by the impact of pricing strategies and higher treasury services-related revenue.

Investment and brokerage services income increased $143 million and $339 million primarily driven by the impact of assets under management (AUM) flows and higher market valuations, partially offset by the impact of changing market dynamics on transactional revenue and AUM pricing.

Investment banking income remained relatively unchanged for the three-month period and increased $574 million for the nine-month period primarily due to higher debt and equity issuance fees and higher advisory fees.

Trading account profits decreased $304 million for the three-month period primarily due to weaker performance in fixed-income products, and increased $303 million for the nine-month period primarily due to increased client financing activity in equities.

Mortgage banking income decreased $609 million and $1.0 billion primarily driven by lower net servicing income due to lower mortgage servicing rights (MSR) results, net of the related hedge performance, and lower production income primarily due to lower volume.

Gains on sales of debt securities increased $74 million for the three-month period and decreased $212 million for the nine-month period primarily driven by sales volume.
Other income decreased $69 million for the three-month period due to lower fair value adjustments from economic hedging activities in the fair value option portfolio, partially offset by higher gains on asset sales, and increased $601 million for the nine-month period primarily due to the $793 million pre-tax gain recognized in connection with the sale of the non-U.S. consumer credit card business in the second quarter of 2017.

Provision for Credit Losses

The provision for credit losses decreased $16 million to $834 million, and $428 million to $2.4 billion for the three and nine months ended September 30, 2017 compared to the same periods in 2016 primarily due to credit quality improvements in the consumer real estate portfolio and reductions in energy exposures in the commercial portfolio, partially offset by portfolio seasoning and loan growth in the U.S. credit card portfolio. For more information on the provision for credit losses, see Provision for Credit Losses on page 57.

Noninterest Expense

Table 4 Noninterest Expense

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Personnel	$7,483	$7,704	$24,353	$24,278
Occupancy	999	1,005	3,000	3,069
Equipment	416	443	1,281	1,357
Marketing	461	410	1,235	1,243
Professional fees	476	536	1,417	1,433
Amortization of intangibles	151	181	473	554
Data processing	777	685	2,344	2,240
Telecommunications	170	189	538	551
Other general operating	2,206	2,328	7,072	7,065
Total noninterest expense	$13,139	$13,481	$41,713	$41,790

Noninterest expense declined $342 million to $13.1 billion for the three months ended September 30, 2017 compared to the same period in 2016. The decrease was primarily due to lower personnel and other general operating expense, including the reduction related to the sale of the non-U.S. credit card business.

Noninterest expense for the nine-month period remained relatively unchanged as a $295 million impairment charge related to certain data centers in the process of being sold and higher Federal Deposit Insurance Corporation (FDIC) expense were largely offset by lower litigation expense.

Income Tax Expense

Table 5 Income Tax Expense

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Income before income taxes	$7,866	$7,304	$22,808	$19,098
Income tax expense	2,279	2,349	7,096	5,888
Effective tax rate	29.0 %	32.2 %	31.1 %	30.8 %

The effective tax rates for both the three and nine months ended September 30, 2017 were driven by the impact of our recurring tax preference benefits. The nine-month 2017 effective tax rate also included tax expense of $690 million recognized in connection with the sale of the non-U.S. consumer credit card business in the second quarter of 2017.

The effective tax rates for the three and nine months ended September 30, 2016 were driven by our recurring tax preference benefits, and the third quarter of 2016 included a $350 million charge for the impact of the U.K. tax law changes enacted in September 2016.

Table 6 Selected Quarterly Financial Data

	2017 Quarters			2016 Quarters	
(Dollars in millions, except per share information)	Third	Second	First	Fourth	Third
Income statement					
Net interest income	$11,161	$10,986	$11,058	$10,292	$10,201
Noninterest income	10,678	11,843	11,190	9,698	11,434
Total revenue, net of interest expense	21,839	22,829	22,248	19,990	21,635
Provision for credit losses	834	726	835	774	850
Noninterest expense	13,139	13,726	14,848	13,161	13,481
Income before income taxes	7,866	8,377	6,565	6,055	7,304
Income tax expense	2,279	3,108	1,709	1,359	2,349
Net income	5,587	5,269	4,856	4,696	4,955
Net income applicable to common shareholders	5,122	4,908	4,354	4,335	4,452
Average common shares issued and outstanding	10,198	10,014	10,100	10,170	10,250
Average diluted common shares issued and outstanding	10,725	10,822	10,915	10,959	11,000
Performance ratios					
Return on average assets	0.98 %	0.93 %	0.88 %	0.85 %	0.90 %
Four quarter trailing return on average assets [(1)]	0.91	0.89	0.88	0.82	0.76
Return on average common shareholders' equity	8.14	8.00	7.27	7.04	7.27
Return on average tangible common shareholders' equity[(2)]	11.32	11.23	10.28	9.92	10.28
Return on average shareholders' equity	8.10	7.79	7.35	6.91	7.33
Return on average tangible shareholders' equity [(2)]	10.89	10.54	10.00	9.38	9.98
Total ending equity to total ending assets	11.93	12.02	11.93	12.20	12.30
Total average equity to total average assets	12.05	11.95	12.01	12.24	12.28
Dividend payout	24.78	15.25	17.37	17.68	17.32
Per common share data					
Earnings	$0.50	$0.49	$0.43	$0.43	$0.43
Diluted earnings	0.48	0.46	0.41	0.40	0.41
Dividends paid	0.12	0.075	0.075	0.075	0.075
Book value	23.92	24.88	24.36	24.04	24.19
Tangible book value [(2)]	17.23	17.78	17.23	16.95	17.14
Market price per share of common stock					
Closing	$25.34	$24.26	$23.59	$22.10	$15.65
High closing	25.45	24.32	25.50	23.16	16.19
Low closing	22.89	22.23	22.05	15.63	12.74
Market capitalization	$264,992	$239,643	$235,291	$222,163	$158,438

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

(2) Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For more information on these ratios and for corresponding reconciliations to GAAP financial measures, see

Non-GAAP Reconciliations on page 67.

(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 39.

(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 48 and corresponding Table 33, and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 52 and corresponding Table 40.

(6) Asset quality metrics include $242 million and $243 million of non-U.S. credit card allowance for loan and lease losses and $9.5 billion and $9.2 billion of non-U.S. credit card loans in the first quarter of 2017 and in the fourth quarter of 2016, which were previously included in assets of business held for sale. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

(7) 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.

(8) Net charge-offs exclude $73 million, $55 million, $33 million, $70 million, and $83 million of write-offs in the PCI loan portfolio in the third, second and first quarters of 2017, and in the fourth and third quarters of 2016, respectively. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(9) Includes net charge-offs of $31 million, $44 million and $41 million on non-U.S. credit card loans in the second and first quarters of 2017, and in the fourth quarter of 2016, which were previously included in assets of business held for sale on the Consolidated Balance Sheet at March 31, 2017 and December 31, 2016.

(10) Risk-based capital ratios are reported under Basel 3 Advanced - Transition. For additional information, see Capital Management on page 28.

Table 6 Selected Quarterly Financial Data (continued)

	2017 Quarters			2016 Quarters	
(Dollars in millions)	Third	Second	First	Fourth	Third
Average balance sheet					
Total loans and leases	$918,129	$914,717	$914,144	$908,396	$900,594
Total assets	2,270,872	2,269,153	2,231,420	2,208,039	2,189,490
Total deposits	1,271,711	1,256,838	1,256,632	1,250,948	1,227,186
Long-term debt	227,309	224,019	221,468	220,587	227,269
Common shareholders' equity	249,624	246,003	242,883	245,139	243,679
Total shareholders' equity	273,648	271,223	268,103	270,360	268,899
Asset quality (3)					
Allowance for credit losses (4)	$11,455	$11,632	$11,869	$11,999	$12,459
Nonperforming loans, leases and foreclosed properties (5)	6,869	7,127	7,637	8,084	8,737
Allowance for loan and lease losses as a percentage of total loans and leases outstanding (5, 6)	1.16 %	1.20 %	1.25 %	1.26 %	1.30 %
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases (5, 6)	163	160	156	149	140
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the PCI loan portfolio (5, 6)	158	154	150	144	135
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases (7)	$3,880	$3,782	$4,047	$3,951	$4,068
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 (5, 7)	104 %	104 %	100 %	98 %	91 %
Net charge-offs (8, 9)	$900	$908	$934	$880	$888
Annualized net charge-offs as a percentage of average loans and leases outstanding (5, 8)	0.39 %	0.40 %	0.42 %	0.39 %	0.40 %
Annualized net charge-offs as a percentage of average loans and leases outstanding, excluding the PCI loan portfolio (5)	0.40	0.41	0.42	0.39	0.40
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding (5)	0.42	0.43	0.43	0.42	0.43
Nonperforming loans and leases as a percentage of total loans and leases outstanding (5, 6)	0.71	0.75	0.80	0.85	0.93
Nonperforming loans, leases and foreclosed properties as a percentage of total loans, leases and foreclosed properties (5, 6)	0.75	0.78	0.84	0.89	0.97
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs (6, 8)	3.00	2.99	3.00	3.28	3.31
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs, excluding the PCI loan portfolio (6)	2.91	2.88	2.88	3.16	3.18
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs and PCI	2.77	2.82	2.90	3.04	3.03

write-offs [6]										
Capital ratios at period end [10]										
Risk-based capital:										
Common equity tier 1 capital	11.9	%	11.6	%	11.0	%	11.0	%	11.0	%
Tier 1 capital	13.3		13.2		12.5		12.4		12.4	
Total capital	15.1		15.1		14.4		14.3		14.2	
Tier 1 leverage	9.0		8.9		8.8		8.9		9.1	
Tangible equity [2]	9.1		9.2		9.1		9.2		9.4	
Tangible common equity [2]	8.1		8.0		7.9		8.1		8.2	

For footnotes see page 7.

Table 7 Selected Year-to-Date Financial Data

	Nine Months Ended September 30			
(In millions, except per share information)	2017		2016	
Income statement				
Net interest income	$33,205		$30,804	
Noninterest income	33,711		32,907	
Total revenue, net of interest expense	66,916		63,711	
Provision for credit losses	2,395		2,823	
Noninterest expense	41,713		41,790	
Income before income taxes	22,808		19,098	
Income tax expense	7,096		5,888	
Net income	15,712		13,210	
Net income applicable to common shareholders	14,384		11,889	
Average common shares issued and outstanding	10,103		10,313	
Average diluted common shares issued and outstanding	10,820		11,047	
Performance ratios				
Return on average assets	0.93	%	0.81	%
Return on average common shareholders' equity	7.81		6.61	
Return on average tangible common shareholders' equity[(1)]	10.95		9.40	
Return on average shareholder's equity	7.75		6.66	
Return on average tangible shareholders' equity [(1)]	10.48		9.13	
Total ending equity to total ending assets	11.93		12.30	
Total average equity to total average assets	12.01		12.13	
Dividend payout	19.28		15.19	
Per common share data				
Earnings	$1.42		$1.15	
Diluted earnings	1.35		1.10	
Dividends paid	0.27		0.175	
Book value	23.92		24.19	
Tangible book value [(1)]	17.23		17.14	
Market price per share of common stock				
Closing	$25.34		$15.65	
High closing	25.50		16.43	
Low closing	22.05		11.16	
Market capitalization	$264,992		$158,438	

(1) Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For more information on these ratios and for corresponding reconciliations to GAAP financial measures, see Non-GAAP Reconciliations on page 67.

(2) For more information on the impact of the PCI loan portfolio on asset quality, see Consumer Portfolio Credit Risk Management on page 39.

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

(4)

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 48 and corresponding Table 33, and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 52 and corresponding Table 40.

(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. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

(6) Net charge-offs exclude $161 million and $270 million of write-offs in the PCI loan portfolio for the nine months ended September 30, 2017 and 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

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

(Dollars in millions)	Nine Months Ended September 30 2017	2016
Average balance sheet		
Total loans and leases	$915,678	$897,760
Total assets	2,257,293	2,183,905
Total deposits	1,261,782	1,213,029
Long-term debt	224,287	231,313
Common shareholders' equity	246,195	240,440
Total shareholders' equity	271,012	264,907
Asset quality (2)		
Allowance for credit losses (3)	$11,455	$12,459
Nonperforming loans, leases and foreclosed properties (4)	6,869	8,737
Allowance for loan and lease losses as a percentage of total loans and	1.16 %	1.30 %

leases outstanding [4]		
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases [4]	163	140
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the PCI loan portfolio [4]	158	135
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases [5]	$3,880	$4,068
Allowance for loan and	104 %	91 %

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 (4, 5)		
Net charge-offs (6)	$2,742	$2,941
Annualized net charge-offs as a percentage of average loans and leases outstanding (4, 6)	0.40 %	0.44 %
Annualized net charge-offs as a percentage of average loans and	0.41	0.45

leases outstanding, excluding the PCI loan portfolio (4)		
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding (4)	0.43	0.48
Nonperforming loans and leases as a percentage of total loans and leases outstanding (4)	0.71	0.93
Nonperforming loans, leases and foreclosed properties as a percentage of total loans, leases and foreclosed properties (4)	0.75	0.97
Ratio of the allowance for loan and	2.92	2.98

lease losses at period end to annualized net charge-offs (6)		
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs, excluding the PCI loan portfolio	2.83	2.86
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs and PCI write-offs	2.76	2.73

For footnotes see page 9.

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 a 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., debit valuation adjustment (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

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Fully taxable-equivalent basis data				

Net interest income	$11,401	$10,429	$33,879	$31,470
Total revenue, net of interest expense	22,079	21,863	67,590	64,377
Net interest yield	2.36 %	2.23 %	2.36 %	2.26 %
Efficiency ratio	59.51	61.66	61.71	64.91

Table 9 Quarterly Average Balances and Interest Rates – FTE Basis

	Third Quarter 2017			Third Quarter 2016		
(Dollars in millions)	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	$127,835	$323	1.00%	$133,866	$148	0.44%
Time deposits placed and other short-term investments	12,503	68	2.17	9,336	34	1.45
Federal funds sold and securities borrowed or purchased under agreements to resell	223,585	659	1.17	214,254	267	0.50
Trading account assets	124,068	1,125	3.60	128,879	1,111	3.43
Debt securities (1)	436,886	2,670	2.44	423,182	2,169	2.07
Loans and leases (2):						
Residential mortgage	199,240	1,724	3.46	188,234	1,612	3.42
Home equity	61,225	664	4.31	70,603	681	3.84

U.S. credit card	91,602	2,253	9.76	88,210	2,061	9.30
Non-U.S. credit card [1]	—	—	—	9,256	231	9.94
Direct/Indirect consumer [3]	93,510	678	2.88	92,870	585	2.51
Other consumer [4]	2,762	28	4.07	2,358	18	2.94
Total consumer	448,339	5,347	4.74	451,531	5,188	4.58
U.S. commercial	293,203	2,542	3.44	276,833	2,040	2.93
Commercial real estate [5]	59,044	552	3.71	57,606	452	3.12
Commercial lease financing	21,818	160	2.92	21,194	153	2.88
Non-U.S. commercial	95,725	676	2.80	93,430	599	2.55
Total commercial	469,790	3,930	3.32	449,063	3,244	2.87
Total loans and leases	918,129	9,277	4.02	900,594	8,432	3.73
Other earning assets	76,496	775	4.02	59,951	677	4.50
Total earning assets [6]	1,919,502	14,897	3.09	1,870,062	12,838	2.74
Cash and due from banks [1]	28,990			27,361		
Other assets, less allowance for loan and lease losses [1]	322,380			292,067		
Total assets	$2,270,872			$2,189,490		
Interest-bearing liabilities						

U.S. interest-bearing deposits:						
Savings	$54,328	$1	0.01%	$49,885	$2	0.01%
NOW and money market deposit accounts	631,270	333	0.21	592,907	73	0.05
Consumer CDs and IRAs	44,239	31	0.27	48,695	33	0.27
Negotiable CDs, public funds and other deposits	38,119	101	1.05	32,023	43	0.54
Total U.S. interest-bearing deposits	767,956	466	0.24	723,510	151	0.08
Non-U.S. interest-bearing deposits:						
Banks located in non-U.S. countries	2,259	5	0.97	4,294	9	0.87
Governments and official institutions	1,012	3	1.04	1,391	3	0.61
Time, savings and other	63,716	150	0.93	59,340	103	0.70
Total non-U.S. interest-bearing deposits	66,987	158	0.93	65,025	115	0.71
Total interest-bearing deposits	834,943	624	0.30	788,535	266	0.13
Federal funds purchased, securities	230,230	944	1.63	207,634	569	1.09

loaned or sold under agreements to repurchase, short-term borrowings and other interest-bearing liabilities						
Trading account liabilities	48,390	319	2.62	37,229	244	2.61
Long-term debt	227,309	1,609	2.82	227,269	1,330	2.33
Total interest-bearing liabilities [6]	1,340,872	3,496	1.04	1,260,667	2,409	0.76
Noninterest-bearing sources:						
Noninterest-bearing deposits	436,768			438,651		
Other liabilities	219,584			221,273		
Shareholders' equity	273,648			268,899		
Total liabilities and shareholders' equity	$2,270,872			$2,189,490		
Net interest spread			2.05%			1.98%
Impact of noninterest-bearing sources			0.31			0.25
Net interest income/yield on earning assets		$11,401	2.36%		$10,429	2.23%

(1) Includes assets of the Corporation's non-U.S. consumer credit card business, which was sold during the second quarter of 2017.

(2) 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.

(3) Includes non-U.S. consumer loans of $2.9 billion and $3.2 billion in the third quarter of 2017 and 2016.

(4) Includes consumer finance loans of $406 million and $501 million; consumer leases of $2.2 billion and $1.7 billion, and consumer overdrafts of $193 million and $187 million in the third quarter of 2017 and 2016, respectively.

(5) Includes U.S. commercial real estate loans of $55.2 billion and $54.3 billion, and non-U.S. commercial real estate loans of $3.8 billion and $3.3 billion in the third quarter of 2017 and 2016, respectively.

(6) Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by $7 million and $64 million in the third quarter of 2017 and 2016. Interest expense includes the impact of interest rate risk management contracts, which decreased interest expense on the underlying liabilities by $346 million and $560 million in the third quarter of 2017 and 2016. For additional information, see Interest Rate Risk Management for the Banking Book on page 63.

Table 10 Year-to-Date Average Balances and Interest Rates – FTE Basis

	Nine Months Ended September 30					
	2017			2016		
(Dollars in millions)	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	$127,000	$786	0.83%	$135,910	$460	0.45 %
Time deposits placed and other short-term investments	11,820	173	1.96	8,784	101	1.54
Federal funds sold and securities borrowed or purchased under agreements to resell	222,255	1,658	1.00	215,476	803	0.50
Trading account assets	128,547	3,435	3.57	130,785	3,432	3.50
Debt securities (1)	432,775	7,875	2.42	414,115	6,990	2.27
Loans and leases (2):						
Residential mortgage	196,288	5,082	3.45	187,325	4,867	3.46
Home equity	63,339	1,967	4.15	73,015	2,095	3.83
	90,238	6,492	9.62	87,362	6,065	9.27

U.S. credit card						
Non-U.S. credit card (1)	5,253	358	9.12	9,687	734	10.12
Direct/Indirect consumer (3)	93,316	1,929	2.76	91,291	1,698	2.48
Other consumer (4)	2,648	81	4.07	2,240	50	2.99
Total consumer	451,082	15,909	4.71	450,920	15,509	4.59
U.S. commercial	290,632	7,167	3.30	274,669	5,982	2.91
Commercial real estate (5)	58,340	1,545	3.54	57,550	1,320	3.06
Commercial lease financing	21,862	547	3.33	21,049	482	3.05
Non-U.S. commercial	93,762	1,886	2.69	93,572	1,748	2.50
Total commercial	464,596	11,145	3.21	446,840	9,532	2.85
Total loans and leases	915,678	27,054	3.95	897,760	25,041	3.72
Other earning assets	74,554	2,206	3.95	58,189	2,031	4.66
Total earning assets (6)	1,912,629	43,187	3.02	1,861,019	38,858	2.79
Cash and due from banks (1)	27,955			28,041		
Other assets, less allowance for loan and lease losses (1)	316,709			294,845		
Total assets	$2,257,293			$2,183,905		
Interest-bearing liabilities						
U.S. interest-bearing deposits:						
Savings	$53,679	$4	0.01%	$49,281	$4	0.01 %

NOW and money market deposit accounts	622,920	512	0.11	584,896	216	0.05
Consumer CDs and IRAs	45,535	92	0.27	48,920	101	0.28
Negotiable CDs, public funds and other deposits	35,968	221	0.82	32,212	107	0.45
Total U.S. interest-bearing deposits	758,102	829	0.15	715,309	428	0.08
Non-U.S. interest-bearing deposits:						
Banks located in non-U.S. countries	2,643	16	0.82	4,218	28	0.90
Governments and official institutions	1,002	7	0.92	1,468	7	0.60
Time, savings and other	60,747	400	0.88	58,866	273	0.62
Total non-U.S. interest-bearing deposits	64,392	423	0.88	64,552	308	0.64
Total interest-bearing deposits	822,494	1,252	0.20	779,861	736	0.13
Federal funds purchased, securities loaned or sold under agreements to repurchase, short-term	237,857	2,508	1.41	215,131	1,808	1.12

borrowings and other interest-bearing liabilities							
Trading account liabilities	44,128	890	2.70	37,760	778	2.76	
Long-term debt	224,287	4,658	2.77	231,313	4,066	2.35	
Total interest-bearing liabilities [6]	1,328,766	9,308	0.94	1,264,065	7,388	0.78	
Noninterest-bearing sources:							
Noninterest-bearing deposits	439,288			433,168			
Other liabilities	218,227			221,765			
Shareholders' equity	271,012			264,907			
Total liabilities and shareholders' equity	$2,257,293			$2,183,905			
Net interest spread			2.08%			2.01	%
Impact of noninterest-bearing sources			0.28			0.25	
Net interest income/yield on earning assets		$33,879	2.36%		$31,470	2.26	%

(1) Includes assets of the Corporation's non-U.S. consumer credit card business, which was sold during the second quarter of 2017.

(2) 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.

(3) Includes non-U.S. consumer loans of $2.9 billion and $3.5 billion for the nine months ended September 30, 2017 and 2016.

(4) Includes consumer finance loans of $430 million and $526 million; consumer leases of $2.0 billion and $1.5 billion, and consumer overdrafts of $177 million and $171 million for the nine months ended September 30, 2017 and 2016, respectively.

(5) Includes U.S. commercial real estate loans of $55.0 billion and $54.1 billion, and non-U.S. commercial real estate loans of $3.4 billion and $3.4 billion for the nine months ended September 30, 2017 and 2016, respectively.

(6) Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by $48 million and $155 million for the nine months ended September 30, 2017 and 2016.

Interest expense includes the impact of interest rate risk management contracts, which decreased interest expense on the underlying liabilities by $1.1 billion and $1.7 billion for the nine months ended September 30, 2017 and 2016. For additional information, see Interest Rate Risk Management for the Banking Book on page 63.

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. We periodically review capital allocated to our businesses and allocate 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. Our 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 28. 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 17 – Business Segment Information to the Consolidated Financial Statements.

Consumer Banking

	Three Months Ended September 30						
	Deposits		Consumer Lending		Total Consumer Banking		
(Dollars in millions)	2017	2016	2017	2016	2017	2016	% Change
Net interest income (FTE basis)	$3,439	$2,629	$2,772	$2,660	$6,211	$5,289	17 %
Noninterest income:							
Card income	3	2	1,241	1,216	1,244	1,218	2
Service charges	1,082	1,072	1	—	1,083	1,072	1
Mortgage banking income [1]	—	—	142	297	142	297	(52)
All other income (loss)	96	98	(2)	(6)	94	92	2
Total noninterest income	1,181	1,172	1,382	1,507	2,563	2,679	(4)
Total revenue, net of interest expense (FTE basis)	4,620	3,801	4,154	4,167	8,774	7,968	10
Provision for credit losses	47	43	920	655	967	698	39
Noninterest expense	2,615	2,397	1,844	1,974	4,459	4,371	2
Income before income taxes (FTE basis)	1,958	1,361	1,390	1,538	3,348	2,899	15
Income tax expense (FTE	738	510	523	576	1,261	1,086	16

basis)							
Net income	$1,220	$851	$867	$962	$2,087	$1,813	15
Net interest yield (FTE basis)	2.08 %	1.73 %	4.16 %	4.31 %	3.56 %	3.30 %	
Return on average allocated capital	40	28	14	17	22	21	
Efficiency ratio (FTE basis)	56.61	63.03	44.40	47.40	50.83	54.86	

Balance Sheet

	Three Months Ended September 30						
Average	2017	2016	2017	2016	2017	2016	% Change
Total loans and leases	$5,079	$4,837	$263,731	$243,846	$268,810	$248,683	8 %
Total earning assets (2)	657,036	604,223	264,665	245,540	692,122	636,832	9
Total assets (2)	684,642	630,394	276,014	257,167	731,077	674,630	8
Total deposits	652,286	598,117	6,688	7,588	658,974	605,705	9
Allocated capital	12,000	12,000	25,000	22,000	37,000	34,000	9

(1) Total consolidated mortgage banking income (loss) of $(20) million and $332 million for the three and nine months ended September 30, 2017 were recorded primarily in Consumer Lending and All Other, compared to $589 million and $1.3 billion for the same periods in 2016.

(2) 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.

	Nine Months Ended September 30						
	Deposits		Consumer Lending		Total Consumer Banking		
(Dollars in millions)	2017	2016	2017	2016	2017	2016	% Change
Net interest income (FTE basis)	$9,804	$ 7,940	$8,149	$7,885	$17,953	$15,825	13 %
Noninterest income:							
Card income	6	7	3,710	3,638	3,716	3,645	2
Service charges	3,193	3,079	1	1	3,194	3,080	4
Mortgage banking income [1]	—	—	401	754	401	754	(47)
All other income	294	312	9	4	303	316	(4)
Total noninterest income	3,493	3,398	4,121	4,397	7,614	7,795	(2)
Total revenue, net of interest expense (FTE basis)	13,297	11,338	12,270	12,282	25,567	23,620	8
Provision for credit losses	148	132	2,491	1,823	2,639	1,955	35
Noninterest expense	7,702	7,227	5,578	6,097	13,280	13,324	<(1)
Income before income taxes (FTE basis)	5,447	3,979	4,201	4,362	9,648	8,341	16
Income tax expense (FTE basis)	2,054	1,473	1,584	1,615	3,638	3,088	18
Net income	$3,393	$ 2,506	$2,617	$2,747	$6,010	$5,253	14
Net interest yield (FTE basis)	2.02 %	1.79 %	4.21 %	4.39 %	3.52 %	3.39 %	
Return on average allocated capital	38	28	14	17	22	21	
Efficiency ratio (FTE basis)	57.93	63.74	45.46	49.64	51.94	56.41	

Balance Sheet

	Nine Months Ended September 30							
Average	2017	2016	2017	2016	2017	2016	% Change	
Total loans and leases	$5,025	$ 4,787	$257,779	$238,404	$262,804	$243,191	8	%
Total earning assets (2)	647,887	591,913	258,659	239,870	682,436	623,834	9	
Total assets (2)	675,159	618,466	270,196	251,609	721,245	662,126	9	
Total deposits	642,783	586,334	6,421	7,167	649,204	593,501	9	
Allocated capital	12,000	12,000	25,000	22,000	37,000	34,000	9	

Period end	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016	% Change	
Total loans and leases	$5,060	$ 4,938	$267,300	$254,053	$272,360	$258,991	5	%
Total earning assets (2)	667,733	631,172	268,354	255,511	703,277	662,698	6	
Total assets (2)	695,403	658,316	279,920	268,002	742,513	702,333	6	
Total deposits	662,781	625,727	6,866	7,059	669,647	632,786	6	

See page 14 for footnotes.

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 coast to coast network including financial centers in 33 states and the District of Columbia. Our network includes approximately 4,500 financial centers, 16,000 ATMs, nationwide call centers, and leading digital banking platforms with approximately 34 million active users, including approximately 24 million mobile active users.

Consumer Banking Results

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

Net income for Consumer Banking increased $274 million to $2.1 billion primarily driven by higher net interest income, partially offset by higher provision for credit losses and noninterest expense. Net interest income increased $922 million to $6.2 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits, and loan growth. Noninterest income decreased $116 million to $2.6 billion primarily driven by lower mortgage banking income, partially offset by higher card income and service charges.

The provision for credit losses increased $269 million to $967

million due to portfolio seasoning and loan growth in the U.S. credit
card portfolio. The three months ended September 30, 2017 included a net reserve increase of $167 million compared to a release of $12 million for the three months ended September 30, 2016. Noninterest expense increased $88 million to $4.5 billion primarily driven by investments in digital capabilities and business growth, including increased primary sales professionals combined with investments in new financial centers and renovations, as well as higher litigation expense.

The return on average allocated capital was 22 percent, up from 21 percent, as higher net income was partially offset by an increased capital allocation. For more information on capital allocations, see Business Segment Operations on page 14.

Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016

Net income for Consumer Banking increased $757 million to $6.0 billion primarily driven by higher net interest income, partially offset by higher provision for credit losses. Net interest income increased $2.1 billion to $18.0 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits, as well as pricing discipline and loan growth. Noninterest income decreased $181 million to $7.6 billion driven by lower service charges and card income.

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The provision for credit losses increased $684 million to $2.6 billion due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Noninterest expense decreased $44 million to $13.3 billion driven by improved operating efficiencies, largely offset by higher FDIC, personnel and litigation expenses.
The return on average allocated capital was 22 percent, up from 21 percent, as higher net income was partially offset by an increased capital allocation. For more information on capital allocations, see Business Segment Operations on page 14.
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. Net interest income 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 – Net Migration Summary on page 20.

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016
Net income for Deposits increased $369 million to $1.2 billion driven by higher revenue, partially offset by higher noninterest expense. Net interest income increased $810 million to $3.4 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits, and pricing discipline.
Noninterest expense increased $218 million to $2.6 billion primarily driven by investments in digital capabilities and business growth, including increased primary sales professionals, combined with investments in new financial centers and renovations, and higher litigation and FDIC expenses.
Average deposits increased $54.2 billion to $652.3 billion driven by strong organic growth. Growth in checking, money market savings and traditional savings of $57.4 billion was partially offset by a decline in time deposits of $3.4 billion.
Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016
Net income for Deposits increased $887 million to $3.4 billion. Net interest income increased $1.9 billion to $9.8 billion and noninterest income increased $95 million to $3.5 billion, both of which were primarily driven by the same factors as described in the three-month discussion. The prior-year period included gains on certain divestitures.
The provision for credit losses increased $16 million to $148 million. Noninterest expense increased $475 million to $7.7 billion primarily driven by the same factors as described in the three-month discussion.
Average deposits increased $56.4 billion to $642.8 billion primarily driven by the same factor as described in the three-month discussion.

Key Statistics – Deposits

	Three Months Ended September 30		Nine Months Ended September 30	
	2017	2016	2017	2016
Total deposit spreads (excludes noninterest costs) (1)	1.88%	1.64%	1.82%	1.65%
Period end				
Client brokerage assets (in millions)			$167,274	$137,985
Digital banking active users (units in thousands) (2)			34,472	32,814

Mobile banking active users (units in thousands)	23,572	21,305
Financial centers	4,511	4,629
ATMs	15,973	15,959

(1) Includes deposits held in Consumer Lending.

(2) Digital users represents mobile and/or online users across consumer businesses; historical information has been reclassified primarily due to the sale of the Corporation's non-U.S. consumer credit card business during the second quarter of 2017.

Client brokerage assets increased $29.3 billion driven by strong client flows and market performance. Mobile banking active users increased 2.3 million reflecting continuing changes in our customers’ banking preferences. The number of financial centers declined 118 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.

We classify 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. For more information on the core and non-core portfolios, see Consumer Portfolio Credit Risk Management on page 39.
At September 30, 2017, total owned loans in the core portfolio held in Consumer Lending were $111.6 billion, an increase of $13.8 billion from September 30, 2016, primarily driven by higher residential mortgage balances, partially offset by a decline in home equity balances.
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 – Net Migration Summary on page 20.
Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016
Net income for Consumer Lending decreased $95 million to $867 million driven by higher provision for credit losses and lower noninterest income, partially offset by lower noninterest expense and higher net interest income. Net interest income increased $112 million to $2.8 billion primarily driven by the impact of an increase in loan balances. Noninterest income decreased $125 million to $1.4 billion driven by lower mortgage banking income, partially offset by higher card income.

The provision for credit losses increased $265 million to $920 million due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Noninterest expense decreased $130 million to $1.8 billion primarily driven by improved operating efficiencies.
Average loans increased $19.9 billion to $263.7 billion primarily driven by increases in residential mortgages, as well as U.S. credit card and consumer vehicle loans, partially offset by lower home equity loan balances.
Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016
Net income for Consumer Lending decreased $130 million to $2.6 billion driven by the same factors as described in the three-month discussion. Net interest income increased $264 million to $8.1 billion. Noninterest income decreased $276 million to $4.1 billion. Fluctuations were driven by the same factors as described in the three-month discussion. The provision for credit losses increased $668 million to $2.5 billion due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Noninterest expense decreased $519 million to $5.6 billion primarily driven by the same factor as described in the three-month discussion.
Average loans increased $19.4 billion to $257.8 billion driven by increases in residential mortgages as well as consumer vehicle and U.S credit card loans, partially offset by lower home equity loan balances.

Key Statistics – Consumer Lending

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Total U.S. credit card (1)				
Gross interest yield	9.76 %	9.30 %	9.62 %	9.27 %
Risk-adjusted margin	8.63	9.11	8.64	8.99
New accounts (in thousands)	1,315	1,324	3,801	3,845
Purchase volumes	$62,244	$57,591	$179,230	$165,412
Debit card purchase volumes	$74,769	$71,049	$220,729	$212,316

(1) 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, 2017, the total U.S. credit card risk-adjusted margin decreased 48 bps and 35 bps compared to the same periods in 2016, primarily driven by increased net charge-offs and higher credit card rewards costs.
Total U.S. credit card purchase volumes increased $4.7 billion to $62.2 billion, and $13.8 billion to $179.2 billion, and debit card purchase volumes increased $3.7 billion to $74.8 billion, and $8.4 billion to $220.7 billion, reflecting higher levels of consumer spending.
Mortgage Banking Income

Mortgage banking income in Consumer Banking includes production income and net servicing income. Production 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 made in the sales transactions along with other obligations incurred in the sales of mortgage loans. Production income for the three and nine months ended September 30, 2017 decreased $148 million to $64 million, and $347 million to $185 million compared to the same periods in 2016 due to a decision to retain

a higher percentage of residential mortgage production in Consumer Banking, as well as the impact of a higher interest rate environment driving lower refinances.

Net servicing income within Consumer Banking includes income earned in connection with servicing activities and MSR valuation adjustments for the core portfolio, net of results from risk management activities used to hedge certain market risks of the MSRs. Net servicing income for the three and nine months ended September 30, 2017 decreased $7 million to $78 million, and $6 million to $216 million compared to the same periods in 2016.

Mortgage Servicing Rights

At September 30, 2017, the core MSR portfolio, held within Consumer Lending, was $1.7 billion compared to $1.8 billion at September 30, 2016. The decrease was primarily driven by the amortization of expected cash flows, which exceeded additions to the MSR portfolio, partially offset by changes in fair value from rising interest rates. For more information on MSRs, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements.

Key Statistics

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Loan production [(1)]:				
Total [(2)]:				
First mortgage	$13,183	$16,865	$37,876	$45,802
Home equity	4,133	3,541	12,871	11,649
Consumer Banking:				
First mortgage	$9,044	$11,588	$25,679	$32,207
Home equity	3,722	3,139	11,604	10,535

(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 decreased $2.5 billion and $3.7 billion in the three months ended September 30, 2017 compared to the same period in 2016 primarily driven by a higher interest rate environment driving lower first-lien mortgage refinances. First mortgage loan originations in Consumer Banking and for the total Corporation decreased $6.5 billion and $7.9 billion in the nine months ended September 30, 2017 primarily driven by the same factor as described in the three-month discussion.

Home equity production in Consumer Banking and for the total Corporation increased $583 million and $592 million for the three months ended September 30, 2017 compared to the same period in 2016 due to a higher demand based on improving housing trends, and improved engagement with customers. Home equity production in Consumer Banking and for the total Corporation increased $1.1 billion and $1.2 billion for the nine months ended September 30, 2017 primarily driven by the same factors as described in the three-month discussion.

Global Wealth & Investment Management

	Three Months Ended September 30			Nine Months Ended September 30		
(Dollars in millions)	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	$1,496	$1,394	7 %	$4,653	$4,310	8 %
Noninterest income:						
Investment and brokerage services	2,728	2,585	6	8,073	7,718	5
All other income	396	400	(1)	1,181	1,245	(5)
Total noninterest income	3,124	2,985	5	9,254	8,963	3
Total revenue, net of interest expense (FTE	4,620	4,379	6	13,907	13,273	5

basis)						
Provision for credit losses	16	7	129	50	46	9
Noninterest expense	3,370	3,255	4	10,091	9,816	3
Income before income taxes (FTE basis)	1,234	1,117	10	3,766	3,411	10
Income tax expense (FTE basis)	465	419	11	1,420	1,270	12
Net income	$769	$698	10	$2,346	$2,141	10
Net interest yield (FTE basis)	2.29 %	2.03 %		2.32 %	2.09 %	
Return on average allocated capital	22	21		22	22	
Efficiency ratio (FTE basis)	72.95	74.32		72.56	73.96	

Balance Sheet

	Three Months Ended September 30			Nine Months Ended September 30		
Average	2017	2016	% Change	2017	2016	% Change
Total loans and leases	$154,333	$143,207	8 %	$151,205	$141,169	7 %
Total earning assets	259,564	273,567	(5)	267,732	275,674	(3)
Total assets	275,570	288,820	(5)	283,324	291,382	(3)
Total deposits	239,647	253,812	(6)	247,389	256,356	(3)
Allocated capital	14,000	13,000	8	14,000	13,000	8

Period end	September 30 2017	December 31 2016	% Change
Total loans and leases	$155,871	$148,179	5 %
Total earning assets	259,548	283,151	(8)
Total assets	276,187	298,931	(8)
Total deposits	237,771	262,530	(9)

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.

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

Net income for GWIM increased $71 million to $769 million due to higher revenue, partially offset by an increase in revenue-related expense. The operating margin was 27 percent compared to 26 percent a year ago.

Net interest income increased $102 million to $1.5 billion driven by higher short-term interest rates. Noninterest income, which primarily includes investment and brokerage services income, increased $139 million to $3.1 billion. This increase was driven by the impact of AUM flows and higher market valuations, partially offset by the impact of changing market dynamics on transactional revenue and AUM pricing. Noninterest expense increased $115 million to $3.4 billion primarily driven by higher revenue-related expense.

The return on average allocated capital was 22 percent, up from 21 percent, as higher net income was partially offset by an increased capital allocation.

MLGWM revenue of $3.8 billion increased five percent due to higher net interest income and asset management fees driven by higher market valuations and AUM flows, partially offset by lower transactional revenue. U.S. Trust revenue of $822 million increased eight percent reflecting higher net interest income and asset management fees driven by higher market valuations and AUM flows.

Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016

Net income for GWIM increased $205 million to $2.3 billion due to higher revenue, partially offset by an increase in noninterest expense. The operating margin was 27 percent compared to 26 percent a year ago.

Net interest income increased $343 million to $4.7 billion. Noninterest income, which primarily includes investment and brokerage services income, increased $291 million to $9.3 billion. Noninterest expense increased $275 million to $10.1 billion. These increases were driven by the same factors as described in the three-month discussion.

The return on average allocated capital was 22 percent for both periods.

Revenue from MLGWM of $11.5 billion increased five percent, and U.S. Trust revenue of $2.5 billion increased seven percent. These increases were due to the same factors as described in the three-month discussion.

Key Indicators and Metrics

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions, except as noted)	2017	2016	2017	2016
Revenue by Business				
Merrill Lynch Global Wealth Management	$3,796	$3,617	$11,452	$10,886
U.S. Trust	822	761	2,450	2,300
Other [(1)]	2	1	5	87
Total revenue, net of interest expense (FTE basis)	$4,620	$4,379	$13,907	$13,273
Client Balances by Business, at period end				
Merrill Lynch Global Wealth Management			$2,245,499	$2,089,683
U.S. Trust			430,684	400,538
Total client balances			$2,676,183	$2,490,221
Client Balances by Type, at period end				
Assets under management			$1,036,048	$871,026
Brokerage assets			1,112,178	1,095,635
Assets in custody			131,680	122,804
Deposits			237,771	252,962
Loans and leases [(2)]			158,506	147,794
Total client balances			$2,676,183	$2,490,221
Assets Under Management Rollforward				
Assets under management, beginning of period	$990,709	$832,394	$886,148	$900,863
Net client flows [(3)]	20,749	10,182	77,479	11,648
Market valuation/other [(1)]	24,590	28,450	72,421	(41,485)
Total assets under management, end of period	$1,036,048	$871,026	$1,036,048	$871,026
Associates, at period end [(4, 5)]				
Number of financial advisors			17,221	16,834
Total wealth advisors, including financial advisors			19,108	18,714
Total primary sales professionals, including financial advisors and wealth advisors			20,115	19,594
Merrill Lynch Global Wealth Management Metric [(5)]				
Financial advisor productivity [(6)] (in thousands)	$994	$979	$1,009	$978
U.S. Trust Metric, at period end [(5)]				
Primary sales professionals			1,696	1,684

(1) Includes the results of BofA Global Capital Management, the cash management division of Bank of America, and certain administrative items. Also reflects the sale to a third party of approximately $80 billion of BofA Global Capital Management's AUM in the second quarter of 2016.

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

(3) For the nine months ended September 30, 2016, net client flows included $8.0 billion of net outflows related to BofA Global Capital Management's AUM that were sold during the second quarter of 2016.

(4) Includes financial advisors in the Consumer Banking segment of 2,267 and 2,171 at September 30, 2017 and 2016.

(5) Associate computation is based on headcount.

(6) Financial advisor productivity is defined as annualized MLGWM total revenue, excluding the allocation of certain asset and liability management (ALM) activities, divided by the total average number of financial advisors (excluding financial advisors in the Consumer Banking segment).

Client Balances

Client balances managed under advisory and/or discretion of GWIM are AUM and are typically held in diversified portfolios. Fees earned on AUM are calculated as a percentage of clients' AUM balances. The asset management fees charged to clients per year depend on various factors, but are commonly driven by the breadth of the client's relationship and generally range from 50 to 150 bps on their total AUM. The net client AUM flows represent the net change in clients' AUM balances over a specified period of time, excluding market appreciation/depreciation and other adjustments.

Client balances increased $186.0 billion, or seven percent, to nearly $2.7 trillion at September 30, 2017 compared to September 30, 2016. The increase in client balances was primarily due to AUM which increased $165.0 billion, or 19 percent, due to positive net flows and higher market valuations.

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 [1]

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Total deposits, net – to (from) GWIM	$34	$17	$(250)	$(1,040)
Total loans, net – (from) GWIM	(15)	(15)	(145)	—
Total brokerage, net – (from) GWIM	(199)	(264)	(175)	(830)

(1) Migration occurs primarily between GWIM and Consumer Banking.

Global Banking

	Three Months Ended September 30			Nine Months Ended September 30		
(Dollars in millions)	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	$2,743	$2,470	11 %	$8,229	$7,440	11 %
Noninterest income:						
Service charges	777	780	<(1)	2,351	2,284	3
Investment banking fees	807	796	1	2,661	2,230	19
All other income	659	700	(6)	1,739	1,942	(10)
Total noninterest income	2,243	2,276	(1)	6,751	6,456	5
Total revenue, net of interest expense (FTE basis)	4,986	4,746	5	14,980	13,896	8
Provision for credit losses	48	118	(59)	80	870	(91)
Noninterest expense	2,118	2,152	(2)	6,435	6,450	<(1)
Income before income taxes (FTE basis)	2,820	2,476	14	8,465	6,576	29
Income tax expense (FTE basis)	1,062	925	15	3,192	2,435	31
Net income	$1,758	$1,551	13	$5,273	$4,141	27
Net interest yield (FTE basis)	2.99 %	2.83 %		3.02 %	2.88 %	
Return on average allocated capital	17	17		18	15	
Efficiency ratio (FTE basis)	42.52	45.34		42.97	46.42	

Balance Sheet

	Three Months Ended September 30			Nine Months Ended September 30		
Average	2017	2016	% Change	2017	2016	% Change
Total loans and leases	$346,093	$334,363	4 %	$344,683	$332,474	4 %
Total earning assets	363,560	347,462	5	364,385	345,406	5
Total assets	414,755	395,479	5	414,867	394,425	5
Total deposits	315,692	307,288	3	307,163	301,175	2
Allocated capital	40,000	37,000	8	40,000	37,000	8

Period end	September 30 2017	December 31 2016	% Change
Total loans and leases	$349,838	$339,271	3 %
Total earning assets	371,159	356,241	4
Total assets	423,185	408,330	4
Total deposits	319,545	307,630	4

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, 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, commercial 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.

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

Net income for Global Banking increased $207 million to $1.8 billion driven by higher revenue and lower provision for credit losses.

Revenue increased $240 million to $5.0 billion driven by higher net interest income. Net interest income increased $273 million to $2.7 billion primarily driven by the impact of higher short-term rates, as well as loan and deposit growth, partially offset by modest loan spread compression. Noninterest income decreased $33 million to $2.2 billion largely due to the impact of loans and loan-related hedging activity in the fair value option portfolio, partially offset by higher leasing-related revenue.

The provision for credit losses decreased $70 million to $48 million driven by reductions in energy exposures.

Noninterest expense decreased $34 million to $2.1 billion driven by lower revenue-related incentives, partially offset by investments in technology and relationship bankers.

The return on average allocated capital remained relatively unchanged at 17 percent as higher net income offset the impact of $3.0 billion in additional allocated capital. For more information on capital allocated to the business segments, see Business Segment Operations on page 14.

Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016

Net income for Global Banking increased $1.1 billion to $5.3 billion driven by higher revenue and lower provision for credit losses.

Revenue increased $1.1 billion to $15.0 billion driven by higher net interest income and noninterest income. Net interest income increased $789 million to $8.2 billion driven by loan-related growth, an increased deposit base driven by higher short-term rates and the impact of the allocation of ALM activities, partially offset by margin compression. Noninterest income increased $295 million to $6.8 billion largely due to higher investment banking fees.

The provision for credit losses decreased $790 million to $80 million primarily driven by reductions in energy exposures. Noninterest expense decreased $15 million to $6.4 billion primarily driven by lower personnel and operating expense, partially offset by higher FDIC expense and investments in technology.

The return on average allocated capital was 18 percent, up from 15 percent, as higher net income was partially offset by an

increased capital allocation. For more information on capital allocated to the business segments, see Business Segment Operations on page 14.

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 and following discussion present a summary of the results, which exclude certain investment banking activities in Global Banking.

Global Corporate, Global Commercial and Business Banking

	Three Months Ended September 30							
	Global Corporate Banking		Global Commercial Banking		Business Banking		Total	
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
Revenue								
Business Lending	$1,127	$1,113	$1,090	$1,069	$101	$91	$2,318	$2,273
Global Transaction Services	840	738	758	671	217	182	1,815	1,591
Total revenue, net of interest expense	$1,967	$1,851	$1,848	$1,740	$318	$273	$4,133	$3,864
Balance Sheet								
Average								
Total loans and leases	$159,417	$153,249	$168,945	$163,446	$17,659	$17,658	$346,021	$334,353
Total deposits	149,564	144,694	129,440	127,161	36,687	35,433	315,691	307,288

	Nine Months Ended September 30							
	Global Corporate Banking		Global Commercial Banking		Business Banking		Total	

	2017	2016	2017	2016	2017	2016	2017	2016
Revenue								
Business Lending	$3,322	$3,269	$3,186	$3,129	$301	$280	$6,809	$6,678
Global Transaction Services	2,470	2,171	2,217	2,036	625	549	5,312	4,756
Total revenue, net of interest expense	$5,792	$5,440	$5,403	$5,165	$926	$829	$12,121	$11,434
Balance Sheet								
Average								
Total loans and leases	$157,144	$152,772	$169,751	$162,207	$17,762	$17,467	$344,657	$332,446
Total deposits	146,627	140,817	124,446	125,676	36,092	34,685	307,165	301,178
Period end								
Total loans and leases	$161,441	$151,825	$170,825	$164,518	$17,579	$17,760	$349,845	$334,103
Total deposits	147,893	141,754	135,249	124,995	36,402	35,656	319,544	302,405

Business Lending revenue increased $45 million and $131 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The increase in the three-month period was driven by the impact of loan growth and lease-related activities and the allocation of ALM activities, partially offset by credit spread compression. The increase in the nine-month period was driven by the impact of the allocation of ALM activities and loans and loan-related hedging activity, partially offset by lower revenues from commercial real estate activity.

Global Transaction Services revenue increased $224 million and $556 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016 driven by the impact of an increase in deposit balances and higher short-term rates, the allocation of ALM activities as well as higher treasury-related revenue.

Average loans and leases increased three percent and four percent for the three and nine months ended September 30, 2017

compared to the same periods in 2016 driven by growth in the commercial and industrial, and leasing portfolios. Average deposits increased three percent and two percent for the three and nine months ended September 30, 2017 compared to the same periods in 2016 due to growth with new and existing clients.

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

	Three Months Ended September 30				Nine Months Ended September 30			
	Global Banking		Total Corporation		Global Banking		Total Corporation	
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
Products								
Advisory	$322	$295	$374	$328	$1,177	$913	$1,262	$1,007
Debt issuance	397	405	962	908	1,170	1,060	2,789	2,466
Equity issuance	88	96	193	261	314	257	736	681
Gross investment banking fees	807	796	1,529	1,497	2,661	2,230	4,787	4,154
Self-led deals	(18)	(10)	(52)	(39)	(89)	(36)	(194)	(135)
Total investment banking fees	$789	$786	$1,477	$1,458	$2,572	$2,194	$4,593	$4,019

Total Corporation investment banking fees, excluding self-led deals, of $1.5 billion and $4.6 billion, which are primarily included within Global Banking and Global Markets, increased one percent and 14 percent for the three and nine months ended September

30, 2017 compared to the same periods in 2016. The increase for both periods was driven by higher advisory fees and higher debt issuance fees due to an increase in overall client activity and market fee pools.

Global Markets

	Three Months Ended September 30			Nine Months Ended September 30		
(Dollars in millions)	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	$899	$1,119	(20)%	$2,812	$3,391	(17)%
Noninterest income:						
Investment and brokerage services	496	490	1	1,548	1,583	(2)
Investment banking fees	623	645	(3)	1,879	1,742	8
Trading account profits	1,714	1,934	(11)	5,634	5,401	4
All other income	168	170	(1)	682	501	36
Total noninterest income	3,001	3,239	(7)	9,743	9,227	6
Total revenue, net of interest expense (FTE basis)	3,900	4,358	(11)	12,555	12,618	<(1)
Provision for credit losses	(6)	19	(132)	2	23	(91)
Noninterest expense	2,710	2,656	2	8,117	7,690	6
Income before income taxes (FTE basis)	1,196	1,683	(29)	4,436	4,905	(10)
Income tax expense (FTE basis)	440	609	(28)	1,553	1,746	(11)
Net income	$756	$1,074	(30)	$2,883	$3,159	(9)
Return on average allocated capital	9 %	12 %		11 %	11 %	
Efficiency ratio (FTE basis)	69.48	60.94		64.64	60.94	

Balance Sheet

Average	Three Months Ended September 30 2017	2016	% Change	Nine Months Ended September 30 2017	2016	% Change
Trading-related assets:						
Trading account securities	$216,988	$185,785	17 %	$214,190	$183,928	16 %
Reverse repurchases	101,556	89,435	14	99,998	89,218	12
Securities borrowed	81,950	87,872	(7)	83,770	86,159	(3)
Derivative assets	41,789	52,325	(20)	41,184	52,164	(21)
Total trading-related assets (1)	442,283	415,417	6	439,142	411,469	7
Total loans and leases	72,347	69,043	5	70,692	69,315	2
Total earning assets (1)	446,754	422,636	6	444,478	421,221	6
Total assets	642,430	584,069	10	631,686	582,006	9
Total deposits	32,125	32,840	(2)	32,397	34,409	(6)
Allocated capital	35,000	37,000	(5)	35,000	37,000	(5)

Period end	September 30 2017	December 31 2016	% Change
Total trading-related assets (1)	$426,371	$380,562	12 %
Total loans and leases	76,225	72,743	5
Total earning assets (1)	441,656	397,023	11
Total assets	629,270	566,060	11
Total deposits	33,382	34,927	(4)

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

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. 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 23.

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

Net income for Global Markets decreased $318 million to $756 million driven by lower sales and trading revenue, as well as a decline in investment banking fees and increased noninterest expense. Net DVA losses were $21 million compared to losses of $127 million. Sales and trading revenue, excluding net DVA, decreased $577 million primarily due to less favorable FICC market conditions across credit products and lower volatility in rates products compared to the prior-year period. Noninterest expense increased $54 million to $2.7 billion as continued investments in technology were partially offset by lower operating costs.

Average trading-related assets increased $26.9 billion to $442.3 billion primarily driven by targeted growth in client financing activities in the global equities business.
The return on average allocated capital was nine percent, down from 12 percent as lower net income was partially offset by a decreased capital allocation.
Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016
Net income for Global Markets decreased $276 million to $2.9 billion. Net DVA losses were $310 million compared to losses of $137 million. Excluding net DVA, net income decreased $169 million to $3.1 billion primarily driven by higher noninterest expense and lower sales and trading revenue, partially offset by higher investment banking fees. Sales and trading revenue, excluding net DVA, decreased $168 million primarily due to weaker performance in rates products and emerging markets. Noninterest expense increased $427 million to $8.1 billion primarily due to litigation expense in the nine months ended September 30, 2017 compared to a litigation recovery in the same period in 2016 and continued investments in technology.
Average trading-related assets increased $27.7 billion to $439.1 billion primarily driven by targeted growth in client financing activities in the global equities business. Period-end trading-related assets increased $45.8 billion to $426.4 billion driven by additional inventory in FICC to meet expected client demand as

well as targeted growth in client financing activities in the global equities business.
The return on average allocated capital remained at 11 percent, reflecting lower net income offset by a decrease in average allocated capital.
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, 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 following table 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 following table 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-over-period operating performance.

Sales and Trading Revenue [1, 2]

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Sales and trading revenue				
Fixed-income, currencies and commodities	$2,152	$2,646	$7,068	$7,507
Equities	977	954	3,170	3,072
Total sales and trading revenue	$3,129	$3,600	$10,238	$10,579
Sales and trading revenue, excluding net DVA [3]				
Fixed-income, currencies and commodities	$2,166	$2,767	$7,350	$7,647
Equities	984	960	3,198	3,069
Total sales and trading revenue, excluding net DVA	$3,150	$3,727	$10,548	$10,716

(1) Includes FTE adjustments of $63 million and $162 million for the three and nine months ended September 30, 2017 compared to $49 million and $136 million for the same periods in 2016. 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 $61 million and $175 million for the three and nine months ended September 30, 2017 compared to $57 million and $336 million for the same periods in 2016.

(3) FICC and Equities sales and trading revenue, excluding net DVA, is a non-GAAP financial measure. FICC net DVA losses were $14 million and $282 million for the three and nine months ended September 30, 2017 compared to net DVA losses of $121 million and $140 million for the same periods in 2016. Equities net DVA losses were $7 million and $28 million for the three and nine months ended September 30, 2017 compared to net DVA losses of $6 million and gains of $3 million for the same periods in 2016.

The explanations for period-over-period changes in sales and trading, FICC and Equities revenue, as set forth below, would be the same if net DVA was included.

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

FICC revenue, excluding net DVA, decreased $601 million due to less favorable market conditions across credit-related products and lower volatility in rates products in the current-year quarter. Equities revenue, excluding net DVA, increased $24 million

primarily due to growth in client financing activities, partially offset by slower secondary markets.

Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016

FICC revenue, excluding net DVA, decreased $297 million as weaker performance in rates products and emerging markets were partially offset by strength in credit and G10 currencies. Equities revenue, excluding net DVA, increased $129 million primarily due to growth in client financing activities.

All Other

(Dollars in millions)	Three Months Ended September 30 2017	2016	% Change	Nine Months Ended September 30 2017	2016	% Change
Net interest income (FTE basis)	$52	$157	(67)%	$232	$ 504	(54)%
Noninterest income:						
Card income	—	46	(100)	71	145	(51)
Mortgage banking income (loss)	(163)	292	n/m	(72)	577	(112)
Gains on sales of debt securities	125	51	145	278	490	(43)
All other income (loss)	(215)	(134)	60	72	(746)	(110)
Total noninterest income (loss)	(253)	255	n/m	349	466	(25)
Total revenue, net of interest expense (FTE basis)	(201)	412	(149)	581	970	(40)
Provision for credit losses	(191)	8	n/m	(376)	(71)	n/m
Noninterest expense	482	1,047	(54)	3,790	4,510	(16)
Loss before income taxes (FTE basis)	(492)	(643)	(23)	(2,833)	(3,469)	(18)
Income tax expense (benefit) (FTE basis)	(709)	(462)	53	(2,033)	(1,985)	2
Net income (loss)	$217	$(181)	n/m	$(800)	$ (1,484)	(46)

Balance Sheet [1]

Average	Three Months Ended September 30 2017	2016	% Change	Nine Months Ended September 30 2017	2016	% Change
Total loans and leases	$76,546	$105,298	(27)%	$86,294	$ 111,611	(23)%
Total deposits	25,273	27,541	(8)	25,629	27,588	(7)

Period end	September 30 2017	December 31 2016	% Change
Total loans and leases [2]	$72,823	$ 96,713	(25)%

Total deposits	24,072	23,061	4

(1) 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' equity. Such allocated assets were $510.1 billion and $517.9 billion for the three and nine months ended September 30, 2017 compared to $500.4 billion and $497.8 billion for the same periods in 2016, and $515.0 billion and $518.7 billion at September 30, 2017 and December 31, 2016.

(2) Included $9.2 billion of non-U.S. credit card loans, which were included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

n/m = not meaningful

All Other consists of ALM activities, equity investments, 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 and the related economic hedge results and ineffectiveness, other 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 17 – 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.

During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business. For more information on the sale, see Note 1 – Summary of Significant Accounting Principles 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. For more information on the core and non-core portfolios, see Consumer Portfolio Credit Risk Management on page 39. Residential mortgage loans that are held for ALM purposes, including interest rate or liquidity risk management, are classified as core and 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 35 and Interest Rate Risk Management for the Banking Book on page 63. During the nine months ended September 30, 2017, residential mortgage loans held for ALM activities decreased $4.9 billion to $29.8 billion at September 30, 2017 primarily as a result of payoffs and paydowns outpacing new originations. 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 MSRs pertaining to non-core loans serviced for others, are also held in All Other. During the nine months ended September 30, 2017, total non-core loans decreased $9.3 billion to $43.8 billion at September 30, 2017 due primarily to payoffs and paydowns, as well as loan sales.

Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

Results for All Other improved $398 million to net income of $217 million from a net loss of $181 million in the prior-year period, reflecting lower noninterest expense and a benefit in the provision for credit losses, partially offset by a decline in revenue. Revenue declined $613 million to a loss of $201 million reflecting lower mortgage banking income and the impact of the sale of the non-U.S. consumer credit card business. Mortgage banking income was negatively impacted by less favorable valuations on mortgage servicing rights, net of related hedges, and an increase in the provision for representations and warranties.

The provision for credit losses improved $199 million to a benefit of $191 million primarily driven by loan sale recoveries, continued runoff of the non-core portfolio and the sale of the non-U.S. consumer credit card business.

Noninterest expense decreased $565 million to $482 million driven by lower personnel and operational costs due to the sale of the non-U.S. consumer credit card business and lower litigation expense in the non-core mortgage business.

The income tax benefit increased to $709 million from a benefit of $462 million as the prior-year quarter included a $350 million charge for the impact of the U.K. tax law changes enacted in September 2016. Both periods included income tax benefit adjustments to eliminate the FTE treatment in noninterest income of certain tax credits recorded in Global Banking.

Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016

The net loss for All Other decreased $684 million to a net loss of $800 million, reflecting lower noninterest expense, the net gain on sale of the non-U.S. consumer credit card business in the second quarter and a larger benefit in the provision for credit losses, offset by a decline in revenue. Revenue declined $389 million primarily due to lower mortgage banking income. Mortgage banking income decreased $649 million driven by the same factors as described in the three-month discussion. Gains on sales of loans included in all other income, including nonperforming and other delinquent loans, were $108 million compared to gains of $214 million in the same period in 2016.

The benefit in the provision for credit losses increased $305 million to a benefit of $376 million driven by the same factors as described in the three-month discussion. Noninterest expense decreased $720 million to $3.8 billion driven by lower litigation expense, lower personnel expense and a decline in non-core mortgage servicing costs, partially offset by a $295 million impairment charge related to certain data centers in the process of being sold.

The income tax benefit increased $48 million to a benefit of $2.0 billion, reflecting tax expense of $690 million recognized in connection with the sale of the non-U.S. consumer credit card business and tax benefits related to a new accounting standard on share-based compensation. The prior-year period included a $350 million charge for the impact of the U.K. tax law changes. 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 2016 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 2016 Annual Report on Form 10-K.

Representations and Warranties

For more information on representations and warranties, the reserve for representations and warranties exposures and the corresponding estimated range of possible loss, see Note 7 – Representations and Warranties Obligations and Corporate

Guarantees to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K and, for more information related to the sensitivity of the assumptions used to estimate our reserve for representations and warranties, see Complex Accounting Estimates – Representations and Warranties Liability in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

At September 30, 2017 and December 31, 2016, we had $17.6 billion and $18.3 billion of unresolved repurchase claims, predominately related to subprime and pay option first-lien loans and home equity loans. Outstanding repurchase claims remain unresolved primarily due to (1) the level of detail, support and analysis accompanying such claims, which impact overall claim quality and, therefore, claim resolution and (2) the lack of an established process to resolve disputes related to these claims.

In addition to unresolved repurchase claims, we have received notifications from a sponsor of third-party securitizations with whom we engaged in whole-loan transactions indicating that we may have indemnity obligations with respect to specific loans for which we have not received a repurchase request. These notifications were received prior to 2015, and totaled $1.3 billion at both September 30, 2017 and December 31, 2016. During the three months ended September 30, 2017, we reached an agreement with the party requesting indemnity, subject to acceptance of a settlement agreement by a securitization trustee; the impact of this agreement is included in the reserve for representations and warranties.

The reserve 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. At September 30, 2017 and December 31, 2016, the reserve for representations and warranties was $2.2 billion and $2.3 billion. For the three and nine months ended September 30, 2017, the representations and warranties provision was $198 million and $193 million compared to $99 million and $158 million for the same periods in 2016. The increase in the provision was the result of advanced negotiations with certain counterparties where we believe we will reach settlements on several outstanding legacy matters.

In addition, 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, 2017. The estimated range of possible loss 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.

Future provisions and/or ranges of possible loss associated with obligations under representations and warranties may be significantly impacted if future experiences are different from historical experience or our understandings, interpretations or assumptions. Adverse developments, with respect to one or more of the assumptions underlying the reserve for representations and warranties and the corresponding estimated range of possible loss, such as counterparties successfully challenging or avoiding the application of the relevant statute of limitations, could result in significant increases to future provisions and/or the estimated range of possible loss.

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 mortgage insurance 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 and is aligned with the Corporation's strategic, capital and financial operating plans. 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 Reputational Risk sections in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

Capital Management

The Corporation manages its capital position so its 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, meet obligations to creditors and counterparties, 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.

We periodically review capital allocated to our businesses and allocate capital annually during the strategic and capital planning processes. For additional information, see Business Segment Operations on page 14.

Comprehensive Capital Analysis and Review 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 Comprehensive Capital Analysis and Review (CCAR) capital plan.

On June 28, 2017, following the Federal Reserve's non-objection to our 2017 CCAR capital plan, the Board authorized the repurchase of $12.9 billion in common stock from July 1, 2017 through June 30, 2018, including approximately $900 million to offset the effect of equity-based compensation plans during the same period. The common stock repurchase authorization includes both common stock and warrants.

During the three months ended September 30, 2017, pursuant to the Board's authorization, we repurchased $3.0 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 0.25 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 including Basel 3, which includes certain transition provisions through January 1, 2019. The Corporation and its primary affiliated banking entity, BANA, are Basel 3 Advanced approaches institutions.

Basel 3 Overview

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 other comprehensive income (OCI), net of deductions and adjustments primarily related to goodwill, deferred tax assets, intangibles and defined benefit pension assets. Under the Basel 3 regulatory capital transition provisions, certain deductions and adjustments to Common equity tier 1 capital are phased in through January 1, 2018. As of January 1, 2017, under the transition provisions, 80 percent of these deductions and adjustments was recognized. Basel 3 also 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. Finally, Basel 3 established two methods of calculating risk-weighted assets, the Standardized approach and the Advanced approaches. The Standardized approach relies primarily on supervisory risk weights based on exposure type, and the Advanced approaches determine risk weights based on internal models.

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.

Minimum Capital Requirements

Minimum capital requirements and related buffers are being phased in from January 1, 2014 through January 1, 2019. The PCA framework establishes categories of capitalization including “well capitalized,” based on the Basel 3 regulatory ratio requirements. U.S. banking regulators are required to take certain mandatory actions depending on the category of capitalization, with no mandatory actions required for “well-capitalized” banking organizations, which included BANA at September 30, 2017.

We are subject to a capital conservation buffer, a countercyclical capital buffer and a global systemically important

bank (G-SIB) surcharge that are being 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 a G-SIB surcharge in order to avoid restrictions on capital distributions and discretionary bonus payments. The buffers and surcharge must be comprised solely of Common equity tier 1 capital. Under the phase-in provisions, we were required to maintain a capital conservation buffer greater than 1.25 percent plus a G-SIB surcharge of 1.5 percent at September 30, 2017. The countercyclical capital buffer is currently set at zero. We estimate that our fully phased-in G-SIB surcharge will be 2.5 percent. The G-SIB surcharge may differ from this estimate over time. For more information on the Corporation's transition and fully phased-in capital ratios and regulatory requirements, see Table 11.

Supplementary Leverage Ratio

Basel 3 requires Advanced approaches institutions to disclose an SLR. The numerator of the SLR is quarter-end Basel 3 Tier 1 capital. The denominator is total leverage exposure based on the daily average of the sum of on-balance sheet exposures less permitted Tier 1 deductions, as well as the simple average of certain off-balance sheet exposures, as of the end of each month in a quarter. Effective January 1, 2018, the Corporation will be required to maintain a minimum SLR of 3.0 percent, plus a leverage buffer of 2.0 percent in order to avoid certain restrictions on capital distributions and discretionary bonus payments. Insured depository institution subsidiaries of BHCs will be required to maintain a minimum 6.0 percent SLR to be considered "well capitalized" under the PCA framework.

Capital Composition and Ratios

Table 11 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, 2017 and December 31, 2016. 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 14. As of September 30, 2017 and December 31, 2016, the

Corporation met the definition of “well capitalized” under current regulatory requirements.

Table 11 Bank of America Corporation Regulatory Capital under Basel 3 (1)

(Dollars in millions)	September 30, 2017 Transition Standardized Approach	Advanced Approaches	Regulatory Minimum (2)	Fully Phased-in Standardized Approach	Advanced Approaches (3)	Regulatory Minimum (4)
Risk-based capital metrics:						
Common equity tier 1 capital	$176,094	$176,094		$173,568	$173,568	
Tier 1 capital	196,438	196,438		195,291	195,291	
Total capital (5)	232,849	223,814		229,779	220,745	
Risk-weighted assets (in billions)	1,407	1,482		1,420	1,460	
Common equity tier 1 capital ratio	12.5 %	11.9 %	7.25 %	12.2 %	11.9 %	9.5 %
Tier 1 capital ratio	14.0	13.3	8.75	13.8	13.4	11.0
Total capital ratio	16.5	15.1	10.75	16.2	15.1	13.0
Leverage-based metrics:						
Adjusted quarterly average assets (in billions) (6)	$2,194	$2,194		$2,193	$2,193	
Tier 1 leverage ratio	9.0 %	9.0 %	4.0	8.9 %	8.9 %	4.0
SLR leverage exposure					$2,742	

(in billions)						
SLR					7.1 %	5.0
	December 31, 2016					
Risk-based capital metrics:						
Common equity tier 1 capital	$168,866	$168,866		$162,729	$162,729	
Tier 1 capital	190,315	190,315		187,559	187,559	
Total capital (5)	228,187	218,981		223,130	213,924	
Risk-weighted assets (in billions)	1,399	1,530		1,417	1,512	
Common equity tier 1 capital ratio	12.1 %	11.0 %	5.875 %	11.5 %	10.8 %	9.5 %
Tier 1 capital ratio	13.6	12.4	7.375	13.2	12.4	11.0
Total capital ratio	16.3	14.3	9.375	15.8	14.2	13.0
Leverage-based metrics:						
Adjusted quarterly average assets (in billions) (6)	$2,131	$2,131		$2,131	$2,131	
Tier 1 leverage ratio	8.9 %	8.9 %	4.0	8.8 %	8.8 %	4.0
SLR leverage exposure (in billions)					$2,702	
SLR					6.9 %	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 method at September 30, 2017 and December 31, 2016.

(2) The September 30, 2017 and December 31, 2016 amounts include a transition capital conservation buffer of 1.25 percent and 0.625 percent, and a transition G-SIB surcharge of 1.5 percent and 0.75 percent. The countercyclical capital buffer for both periods is zero.

(3) Basel 3 fully phased-in Advanced approaches estimates assume approval by U.S. banking regulators of our internal models methodology (IMM) for calculating counterparty credit risk regulatory capital for derivatives. As of September 30, 2017, we did not have regulatory approval of the IMM model. Basel 3 fully phased-in Common equity tier 1 capital ratio would be reduced by approximately 25 bps if IMM is not used.

(4) Fully phased-in regulatory minimums assume a capital conservation buffer of 2.5 percent and estimated G-SIB surcharge of 2.5 percent. The estimated fully phased-in countercyclical capital buffer is currently set at 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.

(5) 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.

(6) Reflects adjusted average total assets for the three months ended September 30, 2017 and December 31, 2016.

Common equity tier 1 capital under Basel 3 Advanced – Transition was $176.1 billion at September 30, 2017, an increase of $7.2 billion compared to December 31, 2016 driven by earnings and the exercise of warrants associated with the Series T preferred stock, partially offset by common stock repurchases, dividends and the phase-in under Basel 3 transition provisions of deductions, primarily related to deferred tax assets. During the nine months ended September 30, 2017, total capital increased $4.8 billion

primarily driven by earnings, partially offset by common stock repurchases, dividends and the phase-in under Basel 3 transition provisions.

Risk-weighted assets decreased $48 billion during the nine months ended September 30, 2017 to $1,482 billion primarily due to model improvements, the sale of the non-U.S. consumer credit card business, improved credit quality and lower market risk.

Table 12 shows the capital composition as measured under Basel 3 – Transition at September 30, 2017 and December 31, 2016.

Table 12 Capital Composition under Basel 3 – Transition[1, 2]

(Dollars in millions)	September 30 2017	December 31 2016
Total common shareholders' equity	$ 250,136	$ 241,620
Goodwill	(68,413)	(69,191)
Deferred tax assets arising from net operating loss and tax credit carryforwards	(5,428)	(4,976)
Adjustments for amounts recorded in accumulated OCI attributed to AFS Securities and defined benefit postretirement plans	747	1,899
Adjustments for amounts recorded in accumulated OCI attributed to certain cash flow hedges	739	895
Intangibles, other than mortgage servicing rights and goodwill	(1,263)	(1,198)
Defined benefit pension fund assets	(749)	(512)
DVA related to liabilities and derivatives	632	413
Other	(307)	(84)
Common equity tier 1 capital	176,094	168,866
Qualifying preferred stock, net of issuance cost	22,323	25,220
Deferred tax assets arising from net operating loss and tax credit carryforwards	(1,357)	(3,318)
Defined benefit pension fund assets	(187)	(341)
DVA related to liabilities and derivatives under transition	158	276
Other	(593)	(388)
Total Tier 1 capital	196,438	190,315
Long-term debt qualifying as Tier 2 capital	23,129	23,365
Eligible credit reserves included in Tier 2 capital	2,420	3,035
Nonqualifying capital instruments subject to phase out from Tier 2 capital	1,893	2,271
Other	(66)	(5)
Total Basel 3 Capital	$ 223,814	$ 218,981

(1) See Table 11, footnote 1.

(2) Deductions from and adjustments to regulatory capital subject to transition provisions under Basel 3 are generally 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.

Table 13 presents the components of our risk-weighted assets as measured under Basel 3 – Transition at September 30, 2017 and December 31, 2016.

Table 13 Risk-weighted Assets under Basel 3 – Transition

(Dollars in billions)	September 30, 2017		December 31, 2016	
	Standardized Approach	Advanced Approaches	Standardized Approach	Advanced Approaches
Credit risk	$1,348	$ 868	$1,334	$ 903
Market risk	59	58	65	63
Operational risk	n/a	500	n/a	500

Risks related to CVA	n/a	56	n/a	64
Total risk-weighted assets	$1,407	$ 1,482	$1,399	$ 1,530

n/a = not applicable

Table 14 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, 2017 and December 31, 2016.

Table 14 Regulatory Capital Reconciliations between Basel 3 Transition to Fully Phased-in [1]

(Dollars in millions)	September 30 2017	December 31 2016
Common equity tier 1 capital (transition)	$ 176,094	$ 168,866
Deferred tax assets arising from net operating loss and tax credit carryforwards phased in during transition	(1,357)	(3,318)
Accumulated OCI phased in during transition	(747)	(1,899)
Intangibles phased in during transition	(316)	(798)
Defined benefit pension fund assets phased in during transition	(187)	(341)
DVA related to liabilities and derivatives	158	276

phased in during transition		
Other adjustments and deductions phased in during transition	(77)	(57)
Common equity tier 1 capital (fully phased-in)	173,568	162,729
Additional Tier 1 capital (transition)	20,344	21,449
Deferred tax assets arising from net operating loss and tax credit carryforwards phased out during transition	1,357	3,318
Defined benefit pension fund assets phased out during transition	187	341
DVA related to liabilities and derivatives phased out during transition	(158)	(276)
	(7)	(2)

Other transition adjustments to additional Tier 1 capital		
Additional Tier 1 capital (fully phased-in)	21,723	24,830
Tier 1 capital (fully phased-in)	195,291	187,559
Tier 2 capital (transition)	27,376	28,666
Nonqualifying capital instruments phased out during transition	(1,893)	(2,271)
Other adjustments to Tier 2 capital	9,005	9,176
Tier 2 capital (fully phased-in)	34,488	35,571
Basel 3 Standardized approach Total capital (fully phased-in)	229,779	223,130
Change in Tier 2 qualifying allowance for credit losses	(9,034)	(9,206)
Basel 3 Advanced approaches Total	$ 220,745	$ 213,924

capital (fully phased-in)		
Risk-weighted assets – As reported to Basel 3 (fully phased-in)		
Basel 3 Standardized approach risk-weighted assets as reported	$ 1,407,093	$ 1,399,477
Changes in risk-weighted assets from reported to fully phased-in	12,710	17,638
Basel 3 Standardized approach risk-weighted assets (fully phased-in)	$ 1,419,803	$ 1,417,115
Basel 3 Advanced approaches risk-weighted assets as reported	$ 1,481,919	$ 1,529,903
Changes in risk-weighted assets from reported to fully phased-in	(21,768)	(18,113)
Basel 3 Advanced approaches risk-weighted assets	$ 1,460,151	$ 1,511,790

(fully phased-in) [2]

[1] See Table 11, footnote 1.

[2] Basel 3 fully phased-in Advanced approaches estimates assume approval by U.S. banking regulators of our IMM for calculating counterparty credit risk regulatory capital for derivatives. As of September 30, 2017, we did not have regulatory approval of the IMM model. Basel 3 fully phased-in Common equity tier 1 capital ratio would be reduced by approximately 25 bps if IMM is not used.

Bank of America, N.A. Regulatory Capital

Table 15 presents transition regulatory capital information for BANA in accordance with Basel 3 Standardized and Advanced approaches as measured at September 30, 2017 and December 31, 2016. As of September 30, 2017, BANA met the definition of "well capitalized" under the PCA framework.

Table 15 Bank of America, N.A. Regulatory Capital under Basel 3

	September 30, 2017					
	Standardized Approach			Advanced Approaches		
(Dollars in millions)	Ratio	Amount	Minimum Required [1]	Ratio	Amount	Minimum Required [1]
Common equity tier 1 capital	12.8%	$151,761	6.5%	14.8%	$151,761	6.5%
Tier 1 capital	12.8	151,761	8.0	14.8	151,761	8.0
Total capital	13.9	164,735	10.0	15.2	156,071	10.0
Tier 1 leverage	9.2	151,761	5.0	9.2	151,761	5.0
	December 31, 2016					
Common equity tier 1 capital	12.7%	$149,755	6.5%	14.3%	$149,755	6.5%
Tier 1 capital	12.7	149,755	8.0	14.3	149,755	8.0
Total capital	13.9	163,471	10.0	14.8	154,697	10.0
Tier 1 leverage	9.3	149,755	5.0	9.3	149,755	5.0

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

Regulatory Developments

Minimum Total Loss-Absorbing Capacity

The Federal Reserve has established a final rule effective January 1, 2019, which includes minimum external total loss-absorbing capacity (TLAC) requirements to improve the resolvability and resiliency of large, interconnected BHCs. We estimate our minimum required external TLAC would be the greater of 22.5 percent of risk-weighted assets or 9.5 percent of SLR leverage exposure. In addition, U.S. G-SIBs must meet a minimum long-term debt requirement. Our minimum required long-term debt is estimated to be the greater of 8.5 percent of risk-weighted assets or 4.5 percent of SLR leverage exposure. As of September 30, 2017, the Corporation's TLAC and long-term debt exceeded our estimated 2019 minimum requirements.

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

Revisions to the G-SIB Assessment Framework

On March 30, 2017, the Basel Committee issued a consultative document with proposed revisions to the G-SIB surcharge assessment framework. The proposed revisions would include removing the cap on the substitutability category, expanding the scope of consolidation to include insurance subsidiaries in three categories (size, interconnectedness and complexity) and modifying the substitutability category weights with the

introduction of a new trading volume indicator. The Basel Committee has also requested feedback on a new short-term wholesale funding indicator, which would be included in the interconnectedness category. The U.S. banking regulators may update the U.S. G-SIB surcharge rule to incorporate the Basel Committee revisions.

For more information on our Regulatory Developments, see Capital Management – Regulatory Developments in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

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 Securities and Exchange Commission (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, 2017, MLPF&S’s regulatory net capital as defined by Rule 15c3-1 was $12.9 billion and exceeded the minimum requirement of $1.7 billion by $11.2 billion. MLPCC’s net capital of $3.4 billion exceeded the minimum requirement of $600 million by $2.8 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 SEC in the event its tentative net capital is less than $5.0 billion. At September 30, 2017, 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, 2017, MLI’s capital resources were $35.3 billion which exceeded the minimum Pillar 1 requirement of $15.9 billion.

Common and Preferred Stock Dividends

Table 16 is a summary of our cash dividend declarations on preferred stock during the third quarter of 2017 and through October 30, 2017. During the third quarter of 2017, we recognized $465 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 16 Preferred Stock Cash Dividend Summary

Preferred Stock	September 30, 2017 Outstanding Notional Amount (in millions)	Declaration Date	Record Date	Payment Date	Per Annum Dividend Rate	Dividend Per Share
Series B (1)	$ 1	October 25, 2017	January 11, 2018	January 25, 2018	7.00 %	$1.75
		July 26, 2017	October 11, 2017	October 25, 2017	7.00	1.75
Series D (2)	$ 654	October 9, 2017	November 30, 2017	December 14, 2017	6.204 %	$0.38775
		July 5, 2017	August 31, 2017	September 14, 2017	6.204	0.38775
Series E (2)	$ 317	October 9, 2017	October 31, 2017	November 15, 2017	Floating	$0.25556
		July 5, 2017	July 31, 2017	August 15, 2017	Floating	0.25556
Series F	$ 141	October 9, 2017	November 30, 2017	December 15, 2017	Floating	$1,011.11111
		July 5, 2017	August 31, 2017	September 15, 2017	Floating	1,022.22222
Series G	$ 493	October 9, 2017	November 30, 2017	December 15, 2017	Adjustable	$1,011.11111
		July 5, 2017	August 31, 2017	September 15, 2017	Adjustable	1,022.22222
Series I (2)	$ 365	October 9, 2017	December 15, 2017	January 2, 2018	6.625 %	$0.4140625
		July 5, 2017	September 15, 2017	October 2, 2017	6.625	0.4140625
Series K (3, 4)	$ 1,544	July 5, 2017	July 15, 2017	July 31, 2017	Fixed-to-floating	$40.00
Series L	$ 3,080	September 18, 2017	October 1, 2017	October 30, 2017	7.25 %	$18.125
Series M (3, 4)	$ 1,310	October 9, 2017	October 31, 2017	November 15, 2017	Fixed-to-floating	$40.625
Series T (5)	$ 35	July 26, 2017	September 25, 2017	October 10, 2017	6.00 %	$1,500.00
		October 25, 2017	December 26, 2017	January 10, 2018	6.00	1,500.00
Series U (3, 4)	$ 1,000	October 9, 2017	November 15, 2017	December 1, 2017	Fixed-to-floating	$26.00
	$ 1,500	October 9, 2017	December 1, 2017		Fixed-to-floating	$25.625

Series V [3, 4]				December 18, 2017			
Series W [2]	$ 1,100	October 9, 2017	November 15, 2017	December 11, 2017	6.625	%	$0.4140625
		July 5, 2017	August 15, 2017	September 11, 2017	6.625		0.4140625
Series X [3, 4]	$ 2,000	July 5, 2017	August 15, 2017	September 5, 2017	Fixed-to-floating		$31.25
Series Y [2]	$ 1,100	September 18, 2017	October 1, 2017	October 27, 2017	6.50	%	$0.40625
Series Z [3,4]	$ 1,400	September 18, 2017	October 1, 2017	October 23, 2017	FIxed-to-floating		$32.50
Series AA [3, 4]	$ 1,900	July 5, 2017	September 1, 2017	September 18, 2017	Fixed-to-floating		$30.50
Series CC [2]	$ 1,100	September 18, 2017	October 1, 2017	October 30, 2017	6.20	%	$0.3875
Series DD [3,4]	$ 1,000	July 5, 2017	August 15, 2017	September 11, 2017	Fixed-to-floating		$31.50
Series EE [2]	$ 900	September 18, 2017	October 1, 2017	October 25, 2017	6.00	%	$0.375
Series 1 [6]	$ 98	October 9, 2017	November 15, 2017	November 28, 2017	Floating		$0.18750
		July 5, 2017	August 15, 2017	August 29, 2017	Floating		0.18750
Series 2 [6]	$ 299	October 9, 2017	November 15, 2017	November 28, 2017	Floating		$0.19167
		July 5, 2017	August 15, 2017	August 29, 2017	Floating		0.19167
Series 3 [6]	$ 653	October 9, 2017	November 15, 2017	November 28, 2017	6.375	%	$0.3984375
		July 5, 2017	August 15, 2017	August 28, 2017	6.375		0.3984375
Series 4 [6]	$ 210	October 9, 2017	November 15, 2017	November 28, 2017	Floating		$0.25556
		July 5, 2017	August 15, 2017	August 29, 2017	Floating		0.25556
Series 5 [6]	$ 422	October 9, 2017	November 1, 2017	November 21, 2017	Floating		$0.25556
		July 5, 2017	August 1, 2017	August 21, 2017	Floating		0.25556

(1) Dividends are cumulative.

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

(3) Initially pays dividends semi-annually.

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

(5) The Series T outstanding notional amount represents Series T shares that were not surrendered in the exercise of the warrants. For additional information, see Recent Events on page 3.

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

Liquidity Risk

Funding and Liquidity Risk Management

Our primary liquidity risk management objective is to meet expected or unexpected cash flow and collateral needs while continuing to support our businesses and customers under a range of economic conditions. 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 ALM 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 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 – Time-to-required Funding and Liquidity Stress Analysis in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

NB Holdings Corporation

In 2016, we entered into intercompany arrangements with certain key subsidiaries under which we transferred certain of our parent company assets, and agreed to transfer certain additional parent company assets not needed to satisfy anticipated near-term expenditures, to NB Holdings Corporation, 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. 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.

Global Liquidity Sources and Other Unencumbered Assets

We maintain liquidity available to the 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), 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 securities. 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.

For the three months ended September 30, 2017 and December 31, 2016, our average GLS were $517 billion and $515 billion, and were as shown in Table 17.

Table 17 Average Global Liquidity Sources

Three Months Ended

(Dollars in billions)	September 30 2017	December 31 2016
Parent company and NB Holdings	$ 85	$ 77
Bank subsidiaries	381	389
Other regulated entities	51	49
Total Average Global Liquidity Sources	$ 517	$ 515

Parent company and NB Holdings average liquidity was $85 billion and $77 billion for the three months ended September 30, 2017 and December 31, 2016. The increase in parent company and NB Holdings liquidity was primarily due to debt issuances outpacing maturities. Typically, parent company and NB Holdings liquidity is in the form of cash deposited with BANA.

Average liquidity held at our bank subsidiaries was $381 billion and $389 billion for the three months ended September 30, 2017 and December 31, 2016. Our bank subsidiaries' liquidity is primarily driven by deposit and lending activity, as well as securities valuation and net debt activity. 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 $304 billion and $310 billion at September 30, 2017 and December 31, 2016, with the decrease due to FHLB borrowings, which reduced available borrowing capacity, and adjustments to our valuation model. 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 transfers to the parent company or nonbank subsidiaries may be subject to prior regulatory approval.

Average liquidity held at our other regulated entities, comprised primarily of broker-dealer subsidiaries, was $51 billion and $49 billion for the three months ended September 30, 2017 and December 31, 2016. 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 18 presents the composition of average GLS at September 30, 2017 and December 31, 2016.

Table 18 Average Global Liquidity Sources Composition

	Three Months Ended	
(Dollars in billions)	September 30 2017	December 31 2016
Cash on deposit	$ 117	$ 118
U.S. Treasury securities	62	58
U.S. agency securities and mortgage-backed securities	324	322
Non-U.S. government securities	14	17
Total Average Global Liquidity Sources	$ 517	$ 515

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. However, HQLA for purposes of calculating LCR is not reported at market value, but at a lower value that incorporates regulatory deductions and the exclusion of excess liquidity held at certain subsidiaries. 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. For the three months ended September 30, 2017, our average consolidated HQLA, on a net basis, was $439 billion and the consolidated Corporation's average LCR was 126 percent. Our LCR will fluctuate due to normal business flows from customer activity.

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. TTF was 52 months at September 30, 2017 compared to 35 months at December 31, 2016. The increase in TTF was driven by debt issuances outpacing maturities.

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 our historical experience, experience of distressed and failed financial

institutions, 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 and liability profile and establish limits and guidelines on certain funding sources and businesses.

Net Stable Funding Ratio

U.S. banking regulators have issued a proposal for a Net Stable Funding Ratio (NSFR) requirement applicable to U.S. financial institutions following the Basel Committee's final standard. The U.S. NSFR would apply to the Corporation on a consolidated basis and to our insured depository institutions beginning on January 1, 2018, if finalized as proposed. We expect to meet the NSFR requirement within the regulatory timeline. The standard 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.

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 diversified 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.

We fund a substantial portion of our lending activities through our deposits, which were $1.28 trillion and $1.26 trillion at September 30, 2017 and December 31, 2016. 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 government-sponsored

enterprises, the Federal Housing Administration (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, 2017, we issued $17.1 billion and $50.5 billion of long-term debt consisting of $14.0 billion and $37.5 billion for Bank of America Corporation, substantially all of which was TLAC compliant, $2.1 billion and $7.2 billion for Bank of America, N.A. and $974 million and $5.8 billion of other debt.
Table 19 presents the carrying value of aggregate annual contractual maturities of long-term debt as of September 30, 2017. During the nine months ended September 30, 2017, we had total long-term debt maturities and purchases of $44.1 billion consisting of $24.7 billion for Bank of America Corporation, $13.3 billion for Bank of America, N.A. and $6.1 billion of other debt.

Table 19 Long-term Debt by Maturity

(Dollars in millions)	Remainder of 2017	2018	2019	2020	2021	Thereafter	Total
Bank of America Corporation							
Senior notes	$ 3,576	$ 19,634	$ 18,257	$ 12,389	$ 17,975	$ 72,582	$ 144,413
Senior structured notes	518	2,909	1,470	1,001	426	9,368	15,692
Subordinated notes	—	2,922	1,537	—	372	21,311	26,142
Junior subordinated notes	—	—	—	—	—	3,835	3,835
Total Bank of America Corporation	4,094	25,465	21,264	13,390	18,773	107,096	190,082
Bank of America, N.A.							
Senior notes	—	5,784	—	—	—	21	5,805
Subordinated notes	—	—	1	—	—	1,691	1,692
Advances from Federal Home Loan Banks	5	2,009	2,013	11	2	113	4,153
Securitizations and other Bank VIEs (1)	—	2,300	3,201	3,097	—	42	8,640
Other	25	82	201	19	—	194	521
Total Bank of America, N.A.	30	10,175	5,416	3,127	2	2,061	20,811
Other debt							
Structured liabilities	129	4,667	2,001	1,378	790	7,960	16,925
Nonbank VIEs (1)	12	22	50	—	—	733	817
Other	—	—	—	—	—	31	31
Total other debt	141	4,689	2,051	1,378	790	8,724	17,773

Total long-term debt	$ 4,265	$40,329	$28,731	$17,895	$19,565	$117,881	$228,666

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

Table 20 presents our long-term debt by major currency at September 30, 2017 and December 31, 2016.

Table 20 Long-term Debt by Major Currency

(Dollars in millions)	September 30 2017	December 31 2016
U.S. dollar	$177,505	$ 172,082
Euro	34,813	28,236
British pound	6,951	6,588
Australian dollar	3,050	2,900
Japanese yen	2,938	3,919
Canadian dollar	1,958	1,049
Other	1,451	2,049
Total long-term debt	$228,666	$ 216,823

Total long-term debt increased $11.8 billion, or five percent, in the nine months ended September 30, 2017, primarily due to issuances outpacing maturities. 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 information on funding and liquidity risk management, see Liquidity Risk – Time-to-required Funding and Liquidity Stress Analysis in the MD&A of the Corporation's 2016 Annual Report on Form 10-K and for information regarding long-term debt funding, see Note 11 – Long-term Debt to the Consolidated Financial Statements of the Corporation's 2016 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 more information on our ALM activities, see Interest Rate Risk Management for the Banking Book on page 63.

We may also issue unsecured debt in the form of structured notes for client purposes, certain of which qualify as TLAC eligible debt. During the three and nine months ended September 30, 2017, we issued $1.6 billion and $3.9 billion of structured notes, which 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.

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 21 presents the Corporation's current long-term/short-term senior debt ratings and outlooks expressed by the rating agencies.

On September 28, 2017, Fitch Ratings (Fitch) completed its latest review of 12 large, complex securities trading and universal banks, including Bank of America. The agency affirmed the long-term and short-term senior debt ratings of the Corporation and its rated subsidiaries, including BANA, and maintained its stable outlook on those ratings.

On September 12, 2017, Moody’s Investor Service (Moody’s) placed the long-term ratings of the Corporation and its rated subsidiaries, including BANA, on review for upgrade, citing our improved profitability and commitment to a conservative risk profile as drivers of the review. A rating review indicates that those ratings are under consideration for a change in the near term, which typically concludes within 90 days. Moody’s concurrently affirmed the short-term ratings of the Corporation and its rated subsidiaries.

The ratings from Standard & Poor's Global Ratings (S&P) have not changed from those disclosed in the Corporation's 2016 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 2016 Annual Report on Form 10-K. For more information on the additional collateral and termination payments that could be required in connection with certain over-the-counter (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 2016 Annual Report on Form 10-K.

Table 21 Senior Debt Ratings

Moody’s Investors Service			Standard & Poor’s Global Ratings			Fitch Ratings		
Long-term	Short-term	Outlook	Long-term	Short-term	Outlook	Long-term	Short-term	Outlook
Baa1	P-2		BBB+	A-2	Stable	A	F1	Stable

Bank of America Corporation			Review for upgrade						
Bank of America, N.A.	A1	P-1	Review for upgrade	A+	A-1	Stable	A+	F1	Stable
Merrill Lynch, Pierce, Fenner & Smith Incorporated	NR	NR	NR	A+	A-1	Stable	A+	F1	Stable
Merrill Lynch International	NR	NR	NR	A+	A-1	Stable	A	F1	Stable

NR = not rated

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 48, Non-U.S. Portfolio on page 56, Provision for Credit Losses on page 57, Allowance for Credit Losses on page 57, and Note 4 – Outstanding Loans and Leases and Note 5 – Allowance for Credit Losses to the Consolidated Financial Statements.

During the third quarter of 2017, hurricanes impacted the southern United States and the Caribbean, bringing widespread

flooding and wind damage to communities across the region. In the weeks after these storms, we have been supporting our customers and clients in these communities by providing mobile financial centers and ATMs to supplement local financial centers in affected areas. In addition, we are providing support for the recovery efforts including proactive fee refunds in affected areas, as well as home loan and other credit assistance, including payment deferrals, for impacted individuals and businesses. While we are continuing our assessment, we do not believe that these storms will have a material financial impact on the Corporation.

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 and are a component of our consumer credit risk management process. These models 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.

Consumer Credit Portfolio

Improvement in the U.S. unemployment rate and home prices continued in the three and nine months ended September 30, 2017 resulting in improved credit quality and lower credit losses in the consumer real estate portfolio, partially offset by seasoning and loan growth in the credit card portfolio compared to the same periods in 2016.

Improved credit quality, the sale of the non-U.S. consumer credit card business in the second quarter of 2017, continued loan balance run-off and sales in the consumer real estate portfolio drove a $640 million decrease in the consumer allowance for loan and lease losses during the nine months ended September 30, 2017 to $5.6 billion at September 30, 2017. For additional information, see Allowance for Credit Losses on page 57.

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 2016 Annual Report on Form 10-K.

Table 22 presents our outstanding consumer loans and leases, and the PCI loan portfolio. In addition to being included in the "Outstandings" columns in Table 22, 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 45 and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 22 Consumer Loans and Leases

	Outstandings		Purchased Credit-impaired Loan Portfolio	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Residential mortgage	$199,446	$ 191,797	$8,399	$ 10,127
Home equity	59,752	66,443	2,913	3,611
U.S. credit card	92,602	92,278	n/a	n/a
Non-U.S. credit card	—	9,214	n/a	n/a
Direct/Indirect consumer (1)	93,391	94,089	n/a	n/a
Other consumer (2)	2,424	2,499	n/a	n/a
Consumer loans excluding loans accounted for under the fair value option	447,615	456,320	11,312	13,738
Loans accounted for under the fair value option (3)	978	1,051	n/a	n/a
Total consumer loans and leases (4)	$448,593	$ 457,371	$11,312	$ 13,738

(1) Outstandings include auto and specialty lending loans of $50.0 billion and $48.9 billion, unsecured consumer lending loans of $484 million and $585 million, U.S. securities-based lending loans of $39.3 billion and $40.1 billion, non-U.S. consumer loans of $2.9 billion and $3.0 billion, student loans of $0 and $497 million and other

consumer loans of $682 million and $1.1 billion at September 30, 2017 and December 31, 2016.

(2) Outstandings include consumer leases of $2.3 billion and $1.9 billion, consumer overdrafts of $160 million and $157 million and consumer finance loans of $0 and $465 million at September 30, 2017 and December 31, 2016.

(3) Consumer loans accounted for under the fair value option include residential mortgage loans of $615 million and $710 million and home equity loans of $363 million and $341 million at September 30, 2017 and December 31, 2016. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

(4) Includes $9.2 billion of non-U.S. credit card loans, which were included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

n/a = not applicable

Table 23 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 Fannie Mae (FNMA) and Freddie Mac (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 the Government National Mortgage Association (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 23 Consumer Credit Quality

(Dollars in millions)	Nonperforming		Accruing Past Due 90 Days or More	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Residential mortgage [1]	$2,518	$ 3,056	$3,372	$ 4,793
Home equity	2,691	2,918	—	—
U.S. credit card	n/a	n/a	810	782
Non-U.S. credit card	n/a	n/a	—	66
Direct/Indirect consumer	43	28	31	34
Other consumer	—	2	1	4
Total [2]	$5,252	$ 6,004	$4,214	$ 5,679
Consumer loans and leases as a percentage of outstanding consumer loans and leases [2]	1.17 %	1.32 %	0.94 %	1.24 %
Consumer loans and leases as a percentage of outstanding loans and leases, excluding PCI and fully-insured loan portfolios [2]	1.28	1.45	0.20	0.21

(1) Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At September 30, 2017 and December 31, 2016, residential mortgage included $2.3 billion and $3.0 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 $1.1 billion and $1.8 billion of loans on which interest was still accruing.

(2) Balances exclude consumer loans accounted for under the fair value option. At September 30, 2017 and December 31, 2016, $27 million and $48 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 24 presents net charge-offs and related ratios for consumer loans and leases.

Table 24 Consumer Net Charge-offs and Related Ratios

(Dollars in millions)	Net Charge-offs [1]				Net Charge-off Ratios [1, 2]			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2017	2016	2017	2016	2017	2016	2017	2016
Residential mortgage	$(82)	$4	$(84)	$129	(0.16)%	0.01%	(0.06)%	0.09%
Home equity	83	97	197	335	0.54	0.55	0.42	0.61
U.S. credit	612	543	1,858	1,703	2.65	2.45	2.75	2.60

card								
Non-U.S. credit card	—	43	75	134	—	1.83	1.91	1.84
Direct/Indirect consumer	67	34	147	91	0.28	0.14	0.21	0.13
Other consumer	51	57	116	152	7.23	9.74	5.83	9.09
Total	$731	$778	$2,309	$2,544	0.65	0.69	0.69	0.76

(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 45.

(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.

Net charge-offs, as shown in Tables 24 and 25, exclude write-offs in the PCI loan portfolio of $62 million and $112 million in residential mortgage for the three and nine months ended September 30, 2017 compared to $33 million and $109 million for the same periods in 2016. Net charge-offs, as shown in Tables 24 and 25, exclude write-offs in the PCI loan portfolio of $11 million and $49 million in home equity for the three and nine months ended September 30, 2017 compared to $50 million and $161 million for the same periods in 2016. Net charge-off (recovery) ratios including the PCI write-offs were (0.04) percent and 0.02 percent for residential mortgage for the three and nine months ended September 30, 2017 compared to 0.08 percent and 0.17 percent for the same periods in 2016. Net charge-off ratios including the PCI write-offs were 0.61 percent and 0.52 percent for home equity for the three and nine months ended September 30, 2017 compared to 0.83 percent and 0.91 percent for the same periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

Table 25 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 portfolios within the consumer real estate portfolio. We categorize consumer real estate loans as core and non-core based on 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 in Table 25 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 25, outstanding core consumer real estate loans increased $10.2 billion during the nine months ended September 30, 2017 driven by an increase of $14.2 billion in residential mortgage, partially offset by a $4.0 billion decrease in home equity.

Table 25 Consumer Real Estate Portfolio [1]

	Outstandings		Nonperforming		Net Charge-offs [2]			
					Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016	2017	2016	2017	2016
Core portfolio								
Residential mortgage	$170,657	$ 156,497	$1,076	$ 1,274	$(42)	$(12)	$(40)	$(23)
Home equity	45,377	49,373	1,046	969	26	35	85	81
Total core portfolio	216,034	205,870	2,122	2,243	(16)	23	45	58
Non-core portfolio								
Residential mortgage	28,789	35,300	1,442	1,782	(40)	16	(44)	152
Home equity	14,375	17,070	1,645	1,949	57	62	112	254
Total non-core portfolio	43,164	52,370	3,087	3,731	17	78	68	406
Consumer real estate portfolio								
Residential mortgage	199,446	191,797	2,518	3,056	(82)	4	(84)	129
Home equity	59,752	66,443	2,691	2,918	83	97	197	335
Total consumer real estate portfolio	$259,198	$ 258,240	$5,209	$ 5,974	$1	$101	$113	$464

	Allowance for Loan and Lease Losses		Provision for Loan and Lease Losses			
			Three Months Ended September 30		Nine Months Ended September 30	
	September 30 2017	December 31 2016	2017	2016	2017	2016

Core portfolio						
Residential mortgage	$231	$ 252	$(49)	$(33)	$(60)	$(86)
Home equity	456	560	(10)	2	(19)	10
Total core portfolio	687	812	(59)	(31)	(79)	(76)
Non-core portfolio						
Residential mortgage	582	760	(59)	(34)	(111)	(88)
Home equity	763	1,178	(86)	29	(255)	(27)
Total non-core portfolio	1,345	1,938	(145)	(5)	(366)	(115)
Consumer real estate portfolio						
Residential mortgage	813	1,012	(108)	(67)	(171)	(174)
Home equity	1,219	1,738	(96)	31	(274)	(17)
Total consumer real estate portfolio	$2,032	$ 2,750	$(204)	$(36)	$(445)	$(191)

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option. Consumer loans accounted for under the fair value option include residential mortgage loans of $615 million and $710 million and home equity loans of $363 million and $341 million at September 30, 2017 and December 31, 2016. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

(2) 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 45.

We believe that the presentation of information adjusted to exclude the impact of the PCI loan portfolio, the fully-insured loan portfolio and loans accounted for under the fair value option is more representative of the ongoing 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 45.

Residential Mortgage

The residential mortgage portfolio makes up the largest percentage of our consumer loan portfolio at 45 percent of consumer loans and leases at September 30, 2017. Approximately 35 percent of the residential mortgage portfolio is in Consumer Banking and approximately 35 percent is in GWIM. The remaining portion 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. Outstanding balances in the residential mortgage portfolio, excluding loans accounted for under the fair value option, increased $7.6 billion during the nine months ended September 30, 2017 as retention of new originations was partially offset by loan sales of $3.2 billion, and run-off.

At September 30, 2017 and December 31, 2016, the residential mortgage portfolio included $24.8 billion and $28.7 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, 2017 and December 31, 2016, $18.3 billion and $22.3 billion had FHA insurance with the remainder protected by long-term standby agreements. At September 30,

2017 and December 31, 2016, $5.5 billion and $7.4 billion of the FHA-insured loan population were repurchases of delinquent FHA loans pursuant to our servicing agreements with GNMA.
Table 26 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, the 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 45.

Table 26 Residential Mortgage – Key Credit Statistics

	Reported Basis (1)		Excluding Purchased Credit-impaired and Fully-insured Loans	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Outstandings	$ 199,446	$ 191,797	$ 166,262	$ 152,941
Accruing past due 30 days or more	6,613	8,232	1,893	1,835
Accruing past due 90 days or more	3,372	4,793	—	—
Nonperforming loans	2,518	3,056	2,518	3,056
Percent of portfolio				
Refreshed LTV greater than 90 but less than or equal to 100	3 %	5 %	3 %	3 %
Refreshed LTV greater than 100	3	4	2	3
Refreshed FICO below 620	7	9	3	4
2006 and 2007 vintages (2)	10	13	9	12

	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	
	2017	2016	2017	2016	2017	2016	2017	2016
Net charge-off ratio (3)	(0.16)%	0.01 %	(0.06)%	0.09 %	(0.20)%	0.01 %	(0.07)%	0.12 %

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

(2) These vintages of loans account for $825 million, or 33 percent, and $931 million, or 31 percent of nonperforming residential mortgage loans at September 30, 2017 and December 31, 2016.

(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.

Nonperforming residential mortgage loans decreased $538 million during the nine months ended September 30, 2017 as outflows, including sales of $386 million, outpaced new inflows which included the addition of $140 million of nonperforming loans as a result of clarifying regulatory guidance related to bankruptcy loans. Of the nonperforming residential mortgage loans at September 30, 2017, $880 million, or 35 percent, were current on contractual payments. Loans accruing past due 30 days or more increased $58 million due in part to the timing impact of a consumer real estate servicer conversion that occurred during the third quarter of 2017.

Net charge-offs decreased $86 million to an $82 million net recovery and decreased $213 million to an $84 million net recovery for the three and nine months ended September 30, 2017, compared to the same periods in 2016. These decreases in net charge-offs were primarily driven by net recoveries of $88 million and $102 million related to loan sales during the three and nine months ended September 30, 2017, compared to loan sale-related net recoveries of $7 million and net charge-offs of $35 million for the same periods in 2016. Additionally, net charge-offs declined due to favorable portfolio trends and decreased write-downs on loans greater than 180 days past due driven by improvement in home prices and the U.S. economy.

Loans with a refreshed LTV greater than 100 percent represented two percent and three percent of the residential mortgage loan portfolio at September 30, 2017 and December 31, 2016. Of the loans with a refreshed LTV greater than 100 percent, 99 percent and 98 percent were performing at September 30, 2017 and December 31, 2016. 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 $166.3 billion in total residential mortgage loans outstanding at September 30, 2017, as shown in Table 27, 34 percent were originated as interest-only loans. The outstanding balance of interest-only residential mortgage loans that have entered the amortization period was $10.5 billion, or 18 percent, at September 30, 2017. 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, 2017, $300 million, or three percent of outstanding interest-only residential mortgages that had entered the amortization period were accruing past due 30 days or more compared to $1.9 billion, or one percent for the entire residential mortgage portfolio. In addition, at September 30, 2017, $475 million, or five percent of outstanding interest-only residential mortgage loans that had entered the amortization period were nonperforming, of which $255 million were contractually current, compared to $2.5 billion, or two percent for the entire residential mortgage portfolio, of which $880 million 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 2020 or later.
Table 27 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 16 percent and 15 percent of outstandings at September 30, 2017 and December 31, 2016. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 13 percent and 12 percent of outstandings at September 30, 2017 and December 31, 2016.

Table 27 Residential Mortgage State Concentrations

(Dollars in millions)	Outstandings [1] September 30 2017	Outstandings [1] December 31 2016	Nonperforming [1] September 30 2017	Nonperforming [1] December 31 2016	Net Charge-offs [2] Three Months Ended September 30 2017	Net Charge-offs [2] Three Months Ended September 30 2016	Net Charge-offs [2] Nine Months Ended September 30 2017	Net Charge-offs [2] Nine Months Ended September 30 2016
California	$65,407	$ 58,295	$453	$ 554	$(59)	$(21)	$(84)	$(51)
New York [3]	16,705	14,476	238	290	(1)	(1)	(2)	17
Florida [3]	10,613	10,213	264	322	(9)	2	(11)	19
Texas	7,046	6,607	120	132	1	—	2	8
Massachusetts	5,691	5,344	63	77	(1)	—	(1)	4
Other U.S./Non-U.S.	60,800	58,006	1,380	1,681	(13)	24	12	132
Residential mortgage loans [4]	$166,262	$ 152,941	$2,518	$ 3,056	$(82)	$4	$(84)	$129
Fully-insured loan portfolio	24,785	28,729						
Purchased credit-impaired residential mortgage loan portfolio [5]	8,399	10,127						
Total residential mortgage loan portfolio	$199,446	$ 191,797						

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.
(2) Net charge-offs exclude $62 million and $112 million of write-offs in the residential mortgage PCI loan portfolio for the three and nine months ended September 30, 2017 compared to $33 million and $109 million for the same

periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(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, 2017 and December 31, 2016, 47 percent and 48 percent of PCI residential mortgage loans were in California. There were no other significant single state concentrations.

Home Equity

At September 30, 2017, the home equity portfolio made up 13 percent of the consumer portfolio and is comprised of home equity lines of credit (HELOCs), home equity loans and reverse mortgages.

At September 30, 2017, our HELOC portfolio had an outstanding balance of $52.8 billion, or 88 percent of the total home equity portfolio compared to $58.6 billion, also 88 percent, at December 31, 2016. 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, 2017, our home equity loan portfolio had an outstanding balance of $4.7 billion, or eight percent of the total home equity portfolio compared to $5.9 billion, or nine percent, at December 31, 2016. Home equity loans are almost all fixed-rate loans with amortizing payment terms of 10 to 30 years and of the $4.7 billion at September 30, 2017, 57 percent have 25- to 30-year terms. At September 30, 2017, our reverse mortgage portfolio had an outstanding balance, excluding loans accounted for under the fair value option, of $2.2 billion, or four percent of the total home equity portfolio compared to $1.9 billion, or three percent, at December 31, 2016. We no longer originate reverse mortgages.

At September 30, 2017, approximately 69 percent of the home equity portfolio was in Consumer Banking, 24 percent was 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 $6.7 billion during the nine months ended September 30, 2017 primarily due to paydowns and charge-offs outpacing new originations and draws on existing lines. Of the total home equity portfolio at September 30, 2017 and December 31, 2016, $19.0 billion and $19.6 billion, or 32 percent and 29 percent, were in first-lien positions (33 percent and 31 percent excluding the PCI home equity portfolio). At September 30, 2017, 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 $9.8 billion, or 17 percent of our total home equity portfolio excluding the PCI loan portfolio.

Unused HELOCs totaled $45.4 billion at September 30, 2017 compared to $47.2 billion at December 31, 2016. The decrease was primarily due to accounts reaching the end of their draw period, which automatically eliminates open line exposure, and customers choosing to close accounts. Both of these more than offset the impact of new production. The HELOC utilization rate was 54 percent at September 30, 2017 compared to 55 percent at December 31, 2016.

Table 28 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 45.

Table 28 Home Equity – Key Credit Statistics

	Reported Basis [1]		Excluding Purchased Credit-impaired Loans	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Outstandings	$59,752	$ 66,443	$56,839	$ 62,832
Accruing past due 30 days or more [2]	581	566	581	566
Nonperforming loans [2]	2,691	2,918	2,691	2,918
Percent of portfolio				
Refreshed CLTV greater than 90 but less than or equal to 100	4 %	5 %	3 %	4 %
Refreshed CLTV greater than 100	6	8	5	7
Refreshed FICO below 620	7	7	6	6
2006 and 2007 vintages [3]	31	37	28	34

	Reported Basis				Excluding Purchased Credit-impaired			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2017	2016	2017	2016	2017	2016	2017	2016
Net charge-off ratio [4]	0.54 %	0.55 %	0.42 %	0.61 %	0.56 %	0.58 %	0.44 %	0.65 %

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

(2) Accruing past due 30 days or more includes $74 million and $81 million and nonperforming loans include $329 million and $340 million of loans where we serviced the underlying first-lien at September 30, 2017 and December

31, 2016.

(3) These vintages of loans have higher refreshed combined loan-to-value (CLTV) ratios and accounted for 52 percent and 50 percent of nonperforming home equity loans at September 30, 2017 and December 31, 2016, and 81 percent and 86 percent of net charge-offs for the three and nine months ended September 30, 2017 and 57 percent and 47 percent for the same periods in 2016.

(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 $227 million during the nine months ended September 30, 2017 as outflows, including $66 million of net transfers to held-for-sale and $38 million of sales, outpaced new inflows, which included the addition of $135 million of nonperforming loans as a result of clarifying regulatory guidance related to bankruptcy loans. Of the nonperforming home equity portfolio at September 30, 2017, $1.5 billion, or 55 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, $713 million, or 26 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 increased $15 million during the nine months ended September 30, 2017.

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, 2017, we estimate that $856 million of current and $151 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 $191 million of these combined amounts, with the remaining $816 million serviced by third parties. Of the $1.0 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 $336 million had first-lien loans that were 90 days or more past due.

Net charge-offs decreased $14 million to $83 million and decreased $138 million to $197 million for the three and nine months ended September 30, 2017 compared to same periods in 2016. These decreases in net charge-offs were driven by favorable portfolio trends due in part to improvement in home prices and the U.S. economy, partially offset by $32 million of charge-offs as a result of clarifying regulatory guidance related to bankruptcy loans.

Outstanding balances with a refreshed CLTV greater than 100 percent comprised five percent and seven percent of the home equity portfolio at September 30, 2017 and December 31, 2016. 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, 95 percent of the customers were current on their

home equity loan and 91 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, 2017.
Of the $56.8 billion in total home equity portfolio outstandings at September 30, 2017, as shown in Table 29, 35 percent require interest-only payments. The outstanding balance of HELOCs that have entered the amortization period was $17.8 billion at September 30, 2017. 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, 2017, $379 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, 2017, $2.0 billion, or 11 percent of outstanding HELOCs that had entered the amortization period were nonperforming, of which $1.1 billion were contractually current. Loans in our HELOC portfolio generally have an initial draw period of 10 years and 16 percent of these loans will enter the amortization period through 2018 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, 2017, approximately 35 percent of these customers with an outstanding balance did not pay any principal on their HELOCs.
Table 29 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, 2017 and December 31, 2016. For the three and nine months ended September 30, 2017, loans within this MSA contributed 29 percent and 26 percent of net charge-offs within the home equity portfolio compared to 15 percent and 16 percent of net charge-offs for the same periods in 2016. The Los Angeles-Long Beach-Santa Ana MSA within California made up 11 percent of the outstanding home equity portfolio at both September 30, 2017 and December 31, 2016. For the three and nine months ended September 30, 2017, loans within this MSA contributed net recoveries of $7 million and $16 million within the home equity portfolio compared to net charge-offs of $0 and $2 million for the same periods in 2016.

Table 29 Home Equity State Concentrations

	Outstandings (1)		Nonperforming (1)		Net Charge-offs (2)			
					Three Months Ended September 30		Nine Months Ended September 30	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016				
(Dollars in millions)					2017	2016	2017	2016
California	$15,699	$ 17,563	$782	$ 829	$(9)	$ 3	$(24)	$12
Florida (3)	6,508	7,319	405	442	13	18	34	59
New Jersey (3)	4,683	5,102	195	201	16	12	37	37
New York (3)	4,330	4,720	254	271	14	11	31	37
Massachusetts	2,846	3,078	94	100	5	2	7	10
Other U.S./Non-U.S.	22,773	25,050	961	1,075	44	51	112	180

Home equity loans [4]	$56,839	$ 62,832	$2,691	$ 2,918	$83	$ 97	$197	$335
Purchased credit-impaired home equity portfolio [5]	2,913	3,611						
Total home equity loan portfolio	$59,752	$ 66,443						

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

(2) Net charge-offs exclude $11 million and $49 million of write-offs in the home equity PCI loan portfolio for the three and nine months ended September 30, 2017 compared to $50 million and $161 million for the same periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(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 September 30, 2017 and December 31, 2016, 28 percent and 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 standards for PCI loans. For more information on PCI loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of

the Corporation's 2016 Annual Report on Form 10-K and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 30 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 30 Purchased Credit-impaired Loan Portfolio

(Dollars in millions)	Unpaid Principal Balance	Gross Carrying Value	Related Valuation Allowance	Carrying Value Net of Valuation Allowance	Percent of Unpaid Principal Balance
	September 30, 2017				
Residential mortgage (1)	$ 8,515	$ 8,399	$ 134	$ 8,265	97.06 %
Home equity	2,988	2,913	181	2,732	91.43
Total purchased credit-impaired loan portfolio	$ 11,503	$ 11,312	$ 315	$ 10,997	95.60
	December 31, 2016				
Residential mortgage (1)	$ 10,330	$ 10,127	$ 169	$ 9,958	96.40 %
Home equity	3,689	3,611	250	3,361	91.11
Total purchased credit-impaired loan portfolio	$ 14,019	$ 13,738	$ 419	$ 13,319	95.01

(1) At September 30, 2017 and December 31, 2016, pay option loans had an unpaid principal balance of $1.5 billion and $1.9 billion and a carrying value of $1.5 billion and $1.8 billion. This includes $1.3 billion and $1.6 billion of loans that were credit-impaired upon acquisition and $152 million and $226 million of loans that are 90 days or more past due at September 30, 2017 and December 31, 2016. The total unpaid principal balance of pay option loans with accumulated negative amortization was $177 million and $303 million, including $10 million and $16 million of negative amortization at September 30, 2017 and December 31, 2016.

The total PCI unpaid principal balance decreased $2.5 billion, or 18 percent, during the nine months ended September 30, 2017 primarily driven by payoffs, paydowns and write-offs. During the nine months ended September 30, 2017, we sold PCI loans with a carrying value of $742 million compared to sales of $435 million for the same period in 2016.

Of the unpaid principal balance of $11.5 billion at September 30, 2017, $10.1 billion, or 88 percent, was current based on the contractual terms, $811 million, or seven percent, was in early stage delinquency, and $394 million was 180 days or more past due, including $331 million of first-lien mortgages and $63 million of home equity loans.

The PCI residential mortgage loan portfolio represented 74 percent of the total PCI loan portfolio at September 30, 2017. Those loans to borrowers with a refreshed FICO score below 620 represented 25 percent of the PCI residential mortgage loan portfolio at September 30, 2017. Loans with a refreshed LTV greater than 90 percent, after consideration of purchase accounting adjustments and the related valuation allowance, represented 16 percent of the PCI residential mortgage loan portfolio and 17 percent based on the unpaid principal balance at September 30, 2017.

The PCI home equity portfolio represented 26 percent of the total PCI loan portfolio at September 30, 2017. Those loans with a refreshed FICO score below 620 represented 16 percent of the PCI home equity portfolio at September 30, 2017. Loans with a

refreshed CLTV greater than 90 percent, after consideration of purchase accounting adjustments and the related valuation allowance, represented 35 percent of the PCI home equity portfolio and 38 percent based on the unpaid principal balance at September 30, 2017.

U.S. Credit Card

At September 30, 2017, 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 remained relatively unchanged at $92.6 billion at September 30, 2017. Net charge-offs increased $69 million to $612 million, and $155 million to $1.9 billion for the three and nine months ended September 30, 2017 compared to the same periods in 2016 due to portfolio seasoning and loan growth. U.S. credit card loans 30 days or more past due and still accruing interest increased $62 million and loans 90 days or more past due and still accruing interest increased $28 million during the nine months ended September 30, 2017, driven by portfolio seasoning and loan growth.

Unused lines of credit for U.S. credit card totaled $332.0 billion and $321.6 billion at September 30, 2017 and December 31, 2016. The increase was driven by a seasonal decrease in line utilization due to a decrease in transaction volume as well as account growth and lines of credit increases.

Table 31 presents certain state concentrations for the U.S. credit card portfolio.

Table 31 U.S. Credit Card State Concentrations

	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
					Three Months Ended September 30		Nine Months Ended September 30	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016				
(Dollars in millions)					2017	2016	2017	2016
California	$14,533	$ 14,251	$ 125	$ 115	$104	$86	$303	$269
Florida	8,030	7,864	74	85	58	60	195	184
Texas	7,211	7,037	67	65	46	40	143	122
New York	5,762	5,683	78	60	59	39	155	120
Washington	4,177	4,128	20	18	13	13	41	42
Other U.S.	52,889	53,315	446	439	332	305	1,021	966
Total U.S. credit card portfolio	$92,602	$ 92,278	$ 810	$ 782	$612	$543	$1,858	$1,703

Direct/Indirect Consumer

At September 30, 2017, approximately 54 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) and 46 percent was included in GWIM (principally securities-based lending loans).

Outstandings in the direct/indirect portfolio decreased $698 million during the nine months ended September 30, 2017 primarily driven by lower draws and utilization in the securities-based lending portfolio.

Net charge-offs increased $33 million to $67 million, and $56 million to $147 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016 due largely to recent clarifying regulatory guidance related to bankruptcy and repossessed loans.

Table 32 presents certain state concentrations for the direct/indirect consumer loan portfolio.

Table 32 Direct/Indirect State Concentrations

(Dollars in millions)	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
					Three Months Ended September 30		Nine Months Ended September 30	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016	2017	2016	2017	2016
California	$11,039	$ 11,300	$ 3	$ 3	$7	$ 4	$14	$ 9
Florida	10,469	9,418	4	3	15	7	31	20
Texas	10,410	9,406	3	5	13	6	29	14
New York	6,085	5,253	2	1	2	—	3	1
Illinois	3,436	2,996	1	1	3	1	5	3
Other U.S./Non-U.S.	51,952	55,716	18	21	27	16	65	44
Total direct/indirect loan portfolio	$93,391	$ 94,089	$ 31	$ 34	$67	$ 34	$147	$ 91

Other Consumer

At September 30, 2017, approximately 93 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 33 presents nonperforming consumer loans, leases and foreclosed properties activity for the three and nine months ended September 30, 2017 and 2016. For more information on nonperforming loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements. During the nine months ended September 30, 2017, nonperforming consumer loans declined $752 million to $5.3 billion driven in part by loan sales of $423 million and net transfers of loans to held-for-sale of $198 million. Additionally, nonperforming loans declined as outflows outpaced new inflows, which included the addition of $295 million of nonperforming loans as a result of clarifying regulatory guidance related to bankruptcy loans.

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, 2017, $1.9 billion, or 35 percent of nonperforming consumer real estate loans and foreclosed properties had been written down to their estimated property value less costs to sell, including $1.7 billion of nonperforming loans 180 days or more past due and $259 million of foreclosed

properties. In addition, at September 30, 2017, $2.3 billion, or 45 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 $104 million during the nine months ended September 30, 2017 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 we acquire the underlying real estate upon foreclosure of the delinquent PCI loan, it is included in foreclosed properties. Not included in foreclosed properties at September 30, 2017 was $879 million 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 accrued during the holding period.

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 our 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 33.

Table 33 Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity [1]

(Dollars in millions)	Three Months Ended September 30 2017	2016	Nine Months Ended September 30 2017	2016
Nonperforming loans and leases, beginning of period	$5,282	$6,705	$6,004	$8,165
Additions	999	831	2,499	2,581
Reductions:				
Paydowns and payoffs	(117)	(220)	(517)	(605)
Sales	(162)	(237)	(423)	(1,331)
Returns to performing status [2]	(347)	(383)	(1,101)	(1,220)
Charge-offs	(346)	(279)	(845)	(1,008)
Transfers to foreclosed properties	(57)	(67)	(167)	(232)
Transfers to loans held-for-sale	—	—	(198)	—
Total net reductions to nonperforming loans and leases	(30)	(355)	(752)	(1,815)
Total nonperforming loans and leases, September 30 [3]	5,252	6,350	5,252	6,350
	259	372	259	372

Total foreclosed properties, September 30 [4]				
Nonperforming consumer loans, leases and foreclosed properties, September 30	$5,511	$6,722	$5,511	$6,722
Nonperforming consumer loans and leases as a percentage of outstanding consumer loans and leases [5]	1.17 %	1.41 %		
Nonperforming consumer loans, leases and foreclosed properties as a percentage of outstanding consumer loans, leases and foreclosed properties [5]	1.23	1.49		

(1) Balances do not include nonperforming LHFS of $1 million and $12 million and nonaccruing TDRs removed from the PCI loan portfolio prior to January 1, 2010 of $24 million and $27 million at September 30, 2017 and 2016 as well as loans accruing past due 90 days or more as presented in Table 23 and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

(2) 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.

(3) At September 30, 2017, 32 percent of nonperforming loans were 180 days or more past due.

(4) Foreclosed property balances do not include properties insured by certain government-guaranteed loans, principally FHA-insured loans, of $879 million and $1.3 billion at September 30, 2017 and 2016.

(5) Outstanding consumer loans and leases exclude loans accounted for under the fair value option.

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, 2017 and December 31, 2016, $336 million and $428 million of such junior-lien home equity loans were included in nonperforming loans and leases.

Table 34 presents TDRs for the consumer real estate portfolio. Performing TDR balances are excluded from nonperforming loans and leases in Table 33.

Table 34 Consumer Real Estate Troubled Debt Restructurings

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Total	Nonperforming	Performing	Total	Nonperforming	Performing
Residential mortgage [1, 2]	$10,251	$ 1,575	$ 8,676	$12,631	$ 1,992	$ 10,639
Home equity [3]	2,871	1,480	1,391	2,777	1,566	1,211
Total consumer real estate troubled debt restructurings	$13,122	$ 3,055	$ 10,067	$15,408	$ 3,558	$ 11,850

(1) At September 30, 2017 and December 31, 2016, residential mortgage TDRs deemed collateral dependent totaled $2.9 billion and $3.5 billion, and included $1.3 billion and $1.6 billion of loans classified as nonperforming and $1.6 billion and $1.9 billion of loans classified as performing.

(2) Residential mortgage performing TDRs included $4.1 billion and $5.3 billion of loans that were fully-insured at September 30, 2017 and December 31, 2016.

(3) Home equity TDRs deemed collateral dependent totaled $1.6 billion and included $1.3 billion of loans classified as nonperforming for both periods, and $382 million and $301 million of loans classified as performing at September 30, 2017 and December 31, 2016.

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).

Modifications of credit card and other consumer loans are made through renegotiation programs utilizing direct customer contact, but may also utilize external renegotiation programs. The renegotiated TDR portfolio is excluded in large part from Table 33 as substantially all of the loans remain on accrual status until either charged off or paid in full. At September 30, 2017 and December 31, 2016, our renegotiated TDR portfolio was $485 million and $610 million, of which $428 million and $493 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 39, 42 and 47 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 three percent of total commercial utilized exposure at both September 30, 2017 and December 31, 2016, see Commercial Portfolio Credit Risk Management – Industry Concentrations on page 53 and Table 42.

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 2016 Annual Report on Form 10-K.

Commercial Credit Portfolio

During the nine months ended September 30, 2017, other than in the higher risk energy sub-sectors, credit quality among large corporate borrowers was strong. We saw further improvement in the energy sector in the nine months ended September 30, 2017.

Credit quality of commercial real estate borrowers continued to be strong with conservative LTV ratios, stable market rents in most sectors and vacancy rates remaining low.

Outstanding commercial loans and leases increased $20.0 billion during the nine months ended September 30, 2017 primarily in U.S. commercial. Nonperforming commercial loans and leases decreased $433 million to $1.4 billion and reservable criticized balances decreased $1.5 billion to $14.8 billion during the nine months ended September 30, 2017 driven by improvements in the energy sector. The allowance for loan and lease losses for the commercial portfolio decreased $147 million to $5.1 billion at September 30, 2017 compared to December 31, 2016. For more information, see Allowance for Credit Losses on page 57.

Table 35 presents our commercial loans and leases portfolio and related credit quality information at September 30, 2017 and December 31, 2016.

Table 35 Commercial Loans and Leases

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016
U.S. commercial	$282,677	$ 270,372	$863	$ 1,256	$ 82	$ 106
Commercial real estate [1]	59,628	57,355	130	72	—	7
Commercial lease financing	21,413	22,375	26	36	38	19
Non-U.S. commercial	95,896	89,397	244	279	—	5
	459,614	439,499	1,263	1,643	120	137
U.S. small business commercial [2]	13,603	12,993	55	60	68	71
Commercial loans excluding loans accounted	473,217	452,492	1,318	1,703	188	208

for under the fair value option						
Loans accounted for under the fair value option (3)	5,307	6,034	36	84	—	—
Total commercial loans and leases	$478,524	$ 458,526	$1,354	$ 1,787	$ 188	$ 208

(1) Includes U.S. commercial real estate of $55.5 billion and $54.3 billion and non-U.S. commercial real estate of $4.2 billion and $3.1 billion at September 30, 2017 and December 31, 2016.

(2) Includes card-related products.

(3) Commercial loans accounted for under the fair value option include U.S. commercial of $2.8 billion and $2.9 billion and non-U.S. commercial of $2.5 billion and $3.1 billion at September 30, 2017 and December 31, 2016. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

Table 36 presents net charge-offs and related ratios for our commercial loans and leases for the three and nine months ended September 30, 2017 and 2016. The increase in net charge-offs of $59 million and $36 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016 was driven by higher energy losses, partially offset by lower charge-offs in commercial lease financing. Also, the prior-year period included commercial real estate recoveries.

Table 36 Commercial Net Charge-offs and Related Ratios

	Net Charge-offs				Net Charge-off Ratios (1)			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
U.S. commercial	$80	$62	$176	$155	0.11 %	0.10 %	0.09 %	0.08 %
Commercial real estate	2	(23)	3	(31)	0.02	(0.16)	0.01	(0.07)
Commercial lease financing	(1)	6	—	19	(0.02)	0.11	—	0.12
Non-U.S. commercial	33	10	94	97	0.14	0.04	0.14	0.14
	114	55	273	240	0.10	0.05	0.08	0.08
U.S. small business	55	55	160	157	1.61	1.67	1.60	1.62

commercial								
Total commercial	$169	$110	$433	$397	0.14	0.10	0.13	0.12

(1) 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 37 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 that have been issued and for which we are legally bound to advance funds under prescribed conditions during a specified time period and excludes exposure related to trading account assets. Although funds have not yet been advanced, these exposure types are considered utilized for credit risk management purposes.

Total commercial utilized credit exposure increased $21.5 billion during the nine months ended September 30, 2017 primarily driven by increases 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 59 percent and 58 percent at September 30, 2017 and December 31, 2016.

Table 37 Commercial Credit Exposure by Type

	Commercial Utilized (1)		Commercial Unfunded (2, 3, 4)		Total Commercial Committed	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Loans and leases (5)	$484,565	$ 464,260	$354,927	$ 366,106	$839,492	$ 830,366
Derivative assets (6)	38,384	42,512	—	—	38,384	42,512
Standby letters of credit and financial guarantees	33,967	33,135	723	660	34,690	33,795
Debt securities and other investments	26,190	26,244	5,092	5,474	31,282	31,718
Loans held-for-sale	10,998	6,510	2,246	3,824	13,244	10,334
Commercial letters of credit	1,414	1,464	83	112	1,497	1,576
Bankers' acceptances	389	395	—	13	389	408
Other	514	372	—	—	514	372
Total	$596,421	$ 574,892	$363,071	$ 376,189	$959,492	$ 951,081

(1) Commercial utilized exposure includes loans of $5.3 billion and $6.0 billion and issued letters of credit with a notional amount of $234 million and $284 million accounted for under the fair value option at September 30, 2017 and December 31, 2016.

(2) Commercial unfunded exposure includes commitments accounted for under the fair value option with a notional amount of $4.7 billion and $6.7 billion at September 30, 2017 and December 31, 2016.

(3) Excludes unused business card lines which are not legally binding.

(4) Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g., syndicated or participated) to other financial institutions. The distributed amounts were $11.3 billion and $12.1

billion at September 30, 2017 and December 31, 2016.

(5) Includes credit risk exposure associated with assets under operating lease arrangements of $6.0 billion and $5.7 billion at September 30, 2017 and December 31, 2016.

(6) Derivative assets are carried at fair value, reflect the effects of legally enforceable master netting agreements and have been reduced by cash collateral of $35.6 billion and $43.3 billion at September 30, 2017 and December 31, 2016. Not reflected in utilized and committed exposure is additional non-cash derivative collateral held of $25.6 billion and $25.3 billion at September 30, 2017 and December 31, 2016, which consists primarily of other marketable securities.

Table 38 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 decreased $1.5 billion, or nine

percent, during the nine months ended September 30, 2017 primarily driven by paydowns and upgrades in the energy portfolio. Approximately 80 percent and 76 percent of commercial utilized reservable criticized exposure was secured at September 30, 2017 and December 31, 2016.

Table 38 Commercial Utilized Reservable Criticized Exposure

	September 30, 2017		December 31, 2016	
(Dollars in millions)	Amount (1)	Percent (2)	Amount (1)	Percent (2)
U.S. commercial	$10,098	3.24 %	$10,311	3.46 %
Commercial real estate	628	1.03	399	0.68
Commercial lease financing	650	3.04	810	3.62
Non-U.S. commercial	2,573	2.54	3,974	4.17
	13,949	2.82	15,494	3.27
U.S. small business commercial	875	6.43	826	6.36
Total commercial utilized reservable criticized exposure	$14,824	2.91	$16,320	3.35

(1) Total commercial utilized reservable criticized exposure includes loans and leases of $13.6 billion and $14.9 billion and commercial letters of credit of $1.3 billion and $1.4 billion at September 30, 2017 and December 31, 2016.

(2) 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, 2017, 70 percent of the U.S. commercial loan portfolio, excluding small business, was managed in Global Banking, 17 percent in Global Markets, 11 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 $12.3 billion, or five percent, during the nine months ended September 30, 2017 due to growth across most of the

commercial businesses. Reservable criticized balances decreased $213 million, or two percent, and nonperforming loans and leases decreased $393 million, or 31 percent, in the nine months ended September 30, 2017 driven by improvements in the energy sector. Net charge-offs increased $18 million and $21 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The increase was driven by higher energy losses.

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 23 percent of the commercial real estate loans and leases portfolio at September 30, 2017 and December 31, 2016. 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 increased $2.3 billion, or four percent, during the nine months ended September 30, 2017 due to new originations outpacing paydowns.

For the three and nine months ended September 30, 2017, 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 increased $83 million, or 95 percent, driven by a small number of clients across property types. Reservable criticized balances increased $229 million, or 57 percent, during the nine months ended September 30, 2017 primarily due to loan downgrades. Net charge-offs were $2 million and $3 million for the three and nine months ended September 30, 2017 compared to net recoveries of $23 million and $31 million for the same periods in 2016.

Table 39 presents outstanding commercial real estate loans by geographic region, based on the geographic location of the collateral, and by property type.

Table 39 Outstanding Commercial Real Estate Loans

(Dollars in millions)	September 30 2017	December 31 2016
By Geographic Region		
California	$ 14,274	$ 13,450
Northeast	10,173	10,329
Southwest	7,515	7,567
Southeast	5,415	5,630
Midwest	3,901	4,380
Florida	3,253	3,213
Midsouth	3,069	2,346
Northwest	2,706	2,430
Illinois	2,422	2,408
Non-U.S.	4,159	3,103
Other [(1)]	2,741	2,499
Total outstanding commercial real estate loans	$ 59,628	$ 57,355

By Property Type		
Non-residential		
Office	$ 17,891	$ 16,643
Shopping centers / Retail	9,046	8,794
Multi-family rental	8,427	8,817
Hotels / Motels	6,388	5,550
Industrial / Warehouse	5,429	5,357
Multi-use	2,804	2,822
Unsecured	2,243	1,730
Land and land development	236	357
Other	5,785	5,595
Total non-residential	58,249	55,665
Residential	1,379	1,690
Total outstanding commercial real estate loans	$ 59,628	$ 57,355

(1) 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.

At September 30, 2017, total committed non-residential exposure was $80.1 billion compared to $76.9 billion at December 31, 2016, of which $58.2 billion and $55.7 billion were funded loans. Non-residential nonperforming loans and foreclosed properties increased $84 million, or 104 percent, to $165 million at September 30, 2017 compared to December 31, 2016 driven by a small number of clients across property types. The non-residential nonperforming loans and foreclosed properties represented 0.28 percent and 0.14 percent of total non-residential loans and foreclosed properties at September 30, 2017 and December 31, 2016. Non-residential utilized reservable criticized exposure increased $173 million, or 44 percent, to $570 million

at September 30, 2017 compared to $397 million at December 31, 2016, which represented 0.96 percent and 0.70 percent of non-residential utilized reservable exposure. For the non-residential portfolio, net charge-offs increased $26 million to $3 million and increased $34 million to $4 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016.

At September 30, 2017, total committed residential exposure was $3.1 billion compared to $3.7 billion at December 31, 2016, of which $1.4 billion and $1.7 billion were funded secured loans. The nonperforming loans, leases and foreclosed properties and the utilized reservable criticized ratios for the residential portfolio were 0.33 percent and 4.08 percent at September 30, 2017 compared to 0.35 percent and 0.16 percent at December 31, 2016.

At September 30, 2017 and December 31, 2016, the commercial real estate loan portfolio included $7.1 billion and $6.8 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 $213 million and $107 million, and nonperforming construction and land development loans and foreclosed properties totaled $39 million and $44 million at September 30, 2017 and December 31, 2016. 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, 2017, 80 percent of the non-U.S. commercial loan portfolio was managed in Global Banking and 20 percent in Global Markets. Outstanding loans, excluding loans accounted for under the fair value option, increased $6.5 billion during the nine months ended September 30, 2017. Net charge-offs increased $23 million to $33 million and decreased $3 million to $94 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The three-month increase was driven by higher energy losses. For more information on the non-U.S. commercial portfolio, see Non-U.S. Portfolio on page 56.

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 51 percent and 48 percent of the U.S. small business commercial portfolio at September 30, 2017 and December 31, 2016. Net charge-offs remained relatively unchanged at $55 million and $160 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016. Of the U.S. small business commercial net charge-offs, 92 percent and 90 percent were credit card-related products for the three and nine months ended September 30, 2017 compared to 79 percent and 85 percent for the same periods in 2016.

Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity

Table 40 presents the nonperforming commercial loans, leases and foreclosed properties activity during the three and nine months ended September 30, 2017 and 2016. Nonperforming loans do not include loans accounted for under the fair value option. During the three and nine months ended September 30, 2017, nonperforming commercial loans and leases decreased $202 million and $385 million to $1.3 billion. Approximately 81 percent of commercial nonperforming loans, leases and foreclosed properties were secured and approximately 63 percent were contractually current. Commercial nonperforming loans were carried at approximately 84 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 40 Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity (1, 2)

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016

Nonperforming loans and leases, beginning of period	$1,520	$1,659	$1,703	$1,212
Additions	412	892	1,172	2,089
Reductions:				
Paydowns	(270)	(267)	(803)	(598)
Sales	(61)	(73)	(116)	(166)
Returns to performing status (3)	(100)	(101)	(240)	(177)
Charge-offs	(145)	(102)	(312)	(350)
Transfers to foreclosed properties (4)	—	—	(27)	(2)
Transfers to loans held-for-sale	(38)	(9)	(59)	(9)
Total net additions/(reductions) to nonperforming loans and leases	(202)	340	(385)	787
Total nonperforming loans and leases, September 30	1,318	1,999	1,318	1,999
Total foreclosed properties, September 30 (4)	40	16	40	16
Nonperforming commercial loans, leases and foreclosed properties, September 30	$1,358	$2,015	$1,358	$2,015
Nonperforming commercial loans and	0.28 %	0.45 %		

leases as a percentage of outstanding commercial loans and leases [5]		
Nonperforming commercial loans, leases and foreclosed properties as a percentage of outstanding commercial loans, leases and foreclosed properties [5]	0.29	0.45

(1) Balances do not include nonperforming LHFS of $322 million and $262 million at September 30, 2017 and 2016.

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

(3) 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.

Table 41 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 41 Commercial Troubled Debt Restructurings

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Nonperforming	Performing	Total	Nonperforming	Performing	Total
U.S. commercial	$377	$ 944	$1,321	$720	$ 1,140	$1,860
Commercial real estate	40	15	55	45	95	140
Commercial lease financing	—	12	12	2	2	4
Non-U.S. commercial	12	220	232	25	283	308
	429	1,191	1,620	792	1,520	2,312
U.S. small business commercial	4	15	19	2	13	15
Total commercial troubled debt restructurings	$433	$ 1,206	$1,639	$794	$ 1,533	$2,327

Industry Concentrations

Table 42 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 exposure increased $8.4 billion, or one percent, during the nine months ended September 30, 2017 to $959.5 billion. The increase in commercial committed exposure was concentrated in the Food, Beverage and Tobacco, Diversified Financials and Materials sectors. Increases were partially offset by reduced exposure to the Healthcare Equipment and Services, Banking and Telecommunications sectors.

Industry limits are used internally to manage industry concentrations and are based on committed exposure that is 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 $128.9 billion, increased $4.3 billion, or three percent, during the nine months ended September 30, 2017. The increase primarily reflected an increase in exposure to several counterparties.

Real estate, our second largest industry concentration, with committed exposure of $85.4 billion, increased $1.7 billion, or two percent, during the nine months ended September 30, 2017. For more information on the commercial real estate and related portfolios, see Commercial Portfolio Credit Risk Management – Commercial Real Estate on page

51.

Retailing, our third largest industry concentration, with committed exposure of $68.7 billion, increased $158 million, or less than one percent, during the nine months ended September 30, 2017. The modest increase in committed exposure occurred as increases in Diversified Wholesalers and Vehicle Dealers were offset by decreases Multiline and Specialty retailers.

Our energy-related committed exposure decreased $2.6 billion, or seven percent, to $36.6 billion during the nine months ended September 30, 2017. Energy sector net charge-offs were $131 million during the nine months ended September 30, 2017 compared to $226 million for the same period in 2016. Energy sector reservable criticized exposure decreased $2.4 billion to $3.2 billion during the nine months ended September 30, 2017 due to improvement in credit quality of some borrowers coupled with exposure reductions and fewer new criticized exposures. The energy allowance for credit losses decreased $265 million to $660 million during the nine months ended September 30, 2017.

Table 42 Commercial Credit Exposure by Industry [1]

(Dollars in millions)	Commercial Utilized		Total Commercial Committed [2]	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Diversified financials	$81,120	$ 81,156	$128,879	$ 124,535
Real estate [3]	64,030	61,203	85,351	83,658
Retailing	43,061	41,630	68,665	68,507
Capital goods	35,919	34,278	67,385	64,202
Healthcare equipment and services	38,201	37,656	57,425	64,663
Government and public education	46,537	45,694	56,494	54,626
Materials	24,463	22,578	47,546	44,357
Banking	38,578	39,877	43,637	47,799
Food, beverage and tobacco	23,471	19,669	42,650	37,145
Consumer services	27,446	27,413	42,410	42,523
Energy	16,251	19,686	36,629	39,231
Commercial services and supplies	22,137	21,241	35,448	35,360
Transportation	21,781	19,805	30,124	27,483
Utilities	12,078	11,349	27,281	27,140
Media	13,400	13,419	25,998	27,116
Individuals and trusts	18,860	16,364	24,728	21,764
Pharmaceuticals and biotechnology	7,568	5,539	20,231	18,910
Software and services	9,256	7,991	18,440	19,790
Technology hardware and	7,972	7,793	17,519	18,429

equipment				
Insurance, including monolines	6,731	7,406	13,021	13,936
Telecommunication services	5,870	6,317	12,935	16,925
Automobiles and components	5,710	5,459	12,687	12,969
Consumer durables and apparel	6,403	6,042	12,224	11,460
Food and staples retailing	5,006	4,795	9,367	8,869
Religious and social organizations	4,196	4,423	6,133	6,252
Other	10,376	6,109	16,285	13,432
Total commercial credit exposure by industry	$596,421	$ 574,892	$959,492	$ 951,081
Net credit default protection purchased on total commitments [4]			$(2,098)	$ (3,477)

(1) Includes U.S. small business commercial exposure.

(2) Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g., syndicated or participated) to other financial institutions. The distributed amounts were $11.3 billion and $12.1 billion at September 30, 2017 and December 31, 2016.

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

(4) Represents net notional credit protection purchased. For additional information, see Commercial Portfolio Credit Risk Management – Risk Mitigation below.

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, 2017 and December 31, 2016, 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 $2.1 billion and $3.5 billion. We recorded net losses of $10 million and $57 million for the three and nine months ended September 30, 2017 compared to net losses of $80 million and $408 million for the same periods in 2016 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 50. For additional information, see Trading Risk Management on page 60.
Tables 43 and 44 present the maturity profiles and the credit exposure debt ratings of the net credit default protection portfolio at September 30, 2017 and December 31, 2016.

Table 43 Net Credit Default Protection by Maturity

	September 30 2017		December 31 2016	
Less than or equal to one year	42	%	56	%
Greater than one year and less than or equal to five years	55		41	
Greater than five years	3		3	
Total net credit default protection	100	%	100	%

Table 44 Net Credit Default Protection by Credit Exposure Debt Rating

(Dollars in millions)	September 30, 2017 Net Notional [(1)]	Percent of Total	December 31, 2016 Net Notional [(1)]	Percent of Total
Ratings [(2, 3)]				
A	$(280)	13.3 %	$(135)	3.9 %
BBB	(597)	28.5	(1,884)	54.2
BB	(570)	27.2	(871)	25.1
B	(528)	25.2	(477)	13.7
CCC and below	(101)	4.8	(81)	2.3
NR [(4)]	(22)	1.0	(29)	0.8
Total net credit default protection	$(2,098)	100.0 %	$(3,477)	100.0 %

(1) Represents net credit default protection purchased.
(2) Ratings are refreshed on a quarterly basis.
(3) Ratings of BBB- or higher are considered to meet the definition of investment grade.
(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.

Table 45 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 45 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 45 Credit Derivatives

	September 30, 2017		December 31, 2016	
(Dollars in millions)	Contract/ Notional	Credit Risk	Contract/ Notional	Credit Risk
Purchased credit derivatives:				
Credit default swaps	$522,839	$2,397	$603,979	$2,732
Total return swaps/other	57,591	263	21,165	433
Total purchased credit derivatives	$580,430	$2,660	$625,144	$3,165
Written credit derivatives:				
Credit default swaps	$514,479	n/a	$614,355	n/a
Total return swaps/other	55,313	n/a	25,354	n/a
Total written credit derivatives	$569,792	n/a	$639,709	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 46. 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 following table move

in the same direction as the gross amount or may move in the opposite direction. This movement 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 46 Credit Valuation Gains and Losses

Three Months Ended September 30

(Dollars in millions)	2017			2016		
Gains (Losses)	Gross	Hedge	Net	Gross	Hedge	Net
Credit valuation	$23	$(8)	$15	$280	$(214)	$66

	Nine Months Ended September 30					
	2017			2016		
	Gross	Hedge	Net	Gross	Hedge	Net
Credit valuation	$281	$(188)	$93	$45	$106	$151

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 47 presents our 20 largest non-U.S. country exposures as of September 30, 2017. These exposures accounted for 87 percent and 88 percent of our total non-U.S. exposure at September 30, 2017 and December 31, 2016. Net country exposure for these 20 countries increased $10.3 billion in the nine months ended September 30, 2017 primarily driven by increases in China, Mexico, Belgium, South Korea and Japan, partially offset by decreases in Switzerland, Brazil and the U.K. On a product basis, the increase was driven by increased funded commitments in China, the Netherlands, Mexico and Belgium, along with increased sovereign securities in Japan, India and Korea. These increases were partially offset by the sale of the non-

U.S. consumer credit card business in the second quarter of 2017, and lower unfunded commitments in Switzerland and lower funded commitments in Brazil.

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.

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. 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.

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). Net country exposure represents country exposure less hedges and credit default protection purchased, net of credit default protection sold. For more information on our non-U.S. credit and trading portfolios, see Non-U.S. Portfolio in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

Table 47 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 2017	Hedges and Credit Default Protection	Net Country Exposure at September 30 2017	Increase (Decrease) from December 31 2016
United Kingdom	$ 28,518	$ 14,359	$ 5,020	$ 2,619	$ 50,516	$ (4,814)	$ 45,702	$ (2,031)
Germany	12,374	9,093	1,720	3,603	26,790	(3,607)	23,183	805
Canada	7,942	7,725	2,012	2,460	20,139	(647)	19,492	718
Japan	11,234	549	1,720	4,823	18,326	(1,690)	16,636	1,625
China	11,852	711	509	1,345	14,417	(234)	14,183	3,298
Brazil	7,665	379	382	3,476	11,902	(315)	11,587	(2,079)
France	5,047	5,711	2,141	4,245	17,144	(5,654)	11,490	796
India	6,792	265	385	3,573	11,015	(953)	10,062	834
Australia	5,096	2,810	415	1,994	10,315	(515)	9,800	877

Netherlands	5,137	3,488	763	1,428	10,816	(2,015)	8,801	1,403
Hong Kong	6,845	200	580	704	8,329	(43)	8,286	807
South Korea	4,984	610	757	2,048	8,399	(418)	7,981	1,875
Mexico	3,901	1,616	228	1,650	7,395	(548)	6,847	2,363
Singapore	2,996	315	790	2,128	6,229	(65)	6,164	746
Switzerland	3,414	3,093	300	107	6,914	(1,613)	5,301	(4,345)
Italy	2,483	1,479	587	566	5,115	(1,114)	4,001	(86)
Belgium	2,274	777	114	1,051	4,216	(313)	3,903	1,977
Turkey	2,741	60	37	272	3,110	(1)	3,109	419
Spain	1,740	1,156	299	1,023	4,218	(1,172)	3,046	500
United Arab Emirates	2,186	111	284	78	2,659	(91)	2,568	(175)
Total top 20 non-U.S. countries exposure	$ 135,221	$ 54,507	$ 19,043	$ 39,193	$ 247,964	$ (25,822)	$ 222,142	$ 10,327

A number of economic conditions and geopolitical events have given rise to risk aversion in certain emerging markets. Our two largest emerging market country exposures at September 30, 2017 were China and Brazil. At September 30, 2017, net exposure to China was $14.2 billion, concentrated in large state-owned

companies, subsidiaries of multinational corporations and commercial banks. At September 30, 2017, net exposure to Brazil was $11.6 billion, concentrated in sovereign securities, oil and gas companies and commercial banks.

The outlook for policy direction and therefore economic performance in the European Union (EU) remains uncertain as a consequence of reduced political cohesion among EU countries. Additionally, we believe that the uncertainty on the U.K.'s ability to negotiate a favorable exit from the EU will further weigh on economic performance. Our largest EU country exposure at September 30, 2017 was the U.K. At September 30, 2017, net exposure to the U.K. was $45.7 billion, concentrated in multinational corporations and sovereign clients. For additional information, see Executive Summary – Third Quarter 2017 Economic and Business Environment on page 3.

Provision for Credit Losses

The provision for credit losses decreased $16 million to $834 million, and $428 million to $2.4 billion for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The provision for credit losses was $66 million and $347 million lower than net charge-offs for the three and nine months ended September 30, 2017, resulting in a reduction in the allowance for credit losses. This compared to a reduction of $38 million and $118 million in the allowance for credit losses for the three and nine months ended September 30, 2016.

The provision for credit losses for the consumer portfolio increased $25 million to $730 million, and $268 million to $2.1 billion for the three and nine months ended September 30, 2017 compared to the same periods in 2016. The increase for both periods was primarily driven by a provision increase of $218 million and $554 million in the U.S. credit card portfolio due to portfolio seasoning and loan growth, largely offset by improvement in the home equity portfolio due to increased home prices and lower nonperforming loans. Included in the provision is an expense of $12 million and $56 million related to the PCI loan portfolio for the three and nine months ended September 30, 2017 compared to an expense of $8 million and a benefit of $81 million for the same periods in 2016.

The provision for credit losses for the commercial portfolio, including unfunded lending commitments, decreased $41 million to $104 million, and $696 million to $287 million for the three and nine months ended September 30, 2017 compared to the same periods in 2016 driven by reductions in energy exposures.

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 2016 Annual Report on Form 10-K.

During the three and nine months ended September 30, 2017, the factors that impacted the allowance for loan and lease losses included improvements in the credit quality of the consumer real estate portfolios driven by continuing improvements in the U.S. economy and labor markets, proactive credit risk management

initiatives and the impact of high credit quality originations. Evidencing the improvements in the U.S. economy and labor markets are downward unemployment trends and increases in home prices. In addition to these improvements, in the consumer portfolio, nonperforming consumer loans decreased $752 million in the nine months ended September 30, 2017 as returns to performing status, charge-offs, paydowns and loan sales continued to outpace new nonaccrual loans. During the nine months ended September 30, 2017, the allowance for loan and lease losses in the commercial portfolio reflected decreased energy reserves primarily driven by reductions in energy exposures.

The allowance for loan and lease losses for the consumer portfolio, as presented in Table 49, was $5.6 billion at September 30, 2017, a decrease of $640 million from December 31, 2016. The decrease was primarily in the home equity portfolio and the non-U.S. card portfolio which was sold during the second quarter of 2017, partially offset by an increase in the U.S. credit card portfolio. The reduction in the home equity portfolio was due to improved home prices, lower nonperforming loans and a decrease in loan balances. The increase in the U.S. credit card portfolio was driven by portfolio seasoning and loan growth.

The allowance for loan and lease losses for the commercial portfolio, as presented in Table 49, was $5.1 billion at September 30, 2017, a decrease of $147 million from December 31, 2016 driven by decreased energy reserves due to reductions in the higher risk energy sub-sectors. Commercial utilized reservable criticized exposure decreased to $14.8

billion at September 30, 2017 from $16.3 billion (to 2.91 percent from 3.35 percent of total commercial utilized reservable exposure) at December 31, 2016, largely due to paydowns and net upgrades in the energy portfolio. Nonperforming commercial loans decreased to $1.3 billion at September 30, 2017 from $1.7 billion (to 0.28 percent from 0.38 percent of outstanding commercial loans excluding loans accounted for under the fair value option) at December 31, 2016. See Tables 35, 36 and 38 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 1.16 percent at September 30, 2017 compared to 1.26 percent at December 31, 2016. The September 30, 2017 and December 31, 2016 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 1.14 percent and 1.24 percent at September 30, 2017 and December 31, 2016.
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 2016 Annual Report on Form 10-K.
The reserve for unfunded lending commitments was $762 million at both September 30, 2017 and December 31, 2016.
Table 48 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, 2017 and 2016.

Table 48 Allowance for Credit Losses

(Dollars in millions)	Three Months Ended September 30 2017	Three Months Ended September 30 2016	Nine Months Ended September 30 2017	Nine Months Ended September 30 2016
Allowance for loan and lease losses, beginning of period	$10,875	$11,837	$11,237	$12,234
Loans and leases charged off				
Residential mortgage	(51)	(66)	(157)	(339)
Home equity	(180)	(180)	(476)	(589)
U.S. credit card	(727)	(648)	(2,198)	(2,021)
Non-U.S. credit card [1]	—	(59)	(103)	(183)
Direct/Indirect consumer	(135)	(98)	(356)	(287)
Other consumer	(57)	(63)	(162)	(173)
Total consumer charge-offs	(1,150)	(1,114)	(3,452)	(3,592)
U.S. commercial [2]	(171)	(141)	(449)	(423)
Commercial real estate	(4)	(1)	(12)	(9)
Commercial lease financing	(3)	(9)	(9)	(26)
Non-U.S. commercial	(34)	(12)	(100)	(101)
Total commercial charge-offs	(212)	(163)	(570)	(559)
Total loans and leases charged off	(1,362)	(1,277)	(4,022)	(4,151)
Recoveries of loans and leases previously charged off				
Residential mortgage	133	62	241	210
Home equity	97	83	279	254
U.S. credit card	115	105	340	318
Non-U.S. credit card	—	16	28	49
Direct/Indirect consumer	68	64	209	196
Other consumer	6	6	46	21
Total consumer recoveries	419	336	1,143	1,048
U.S. commercial [3]	36	24	113	111
Commercial real estate	2	24	9	40
Commercial lease financing	4	3	9	7
Non-U.S. commercial	1	2	6	4
Total commercial recoveries	43	53	137	162
Total recoveries of loans and leases previously charged off	462	389	1,280	1,210
Net charge-offs	(900)	(888)	(2,742)	(2,941)
Write-offs of PCI loans	(73)	(83)	(161)	(270)
Provision for loan and lease losses	829	834	2,395	2,802
Other [4]	(38)	(8)	(36)	(133)
Allowance for loan and lease losses, September 30	10,693	11,692	10,693	11,692
Reserve for unfunded lending commitments, beginning of period	757	750	762	646
Provision for unfunded lending commitments	5	16	—	21
Other [4]	—	1	—	100

Reserve for unfunded lending commitments, September 30	762	767	762	767
Allowance for credit losses, September 30	$11,455	$12,459	$11,455	$12,459

(1) Represents net charge-offs of non-U.S. credit card loans, which were previously included in assets of business held for sale. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

(2) Includes U.S. small business commercial charge-offs of $65 million and $193 million for the three and nine months ended September 30, 2017 compared to $66 million and $189 million for the same periods in 2016.

(3) Includes U.S. small business commercial recoveries of $10 million and $33 million for the three and nine months ended September 30, 2017 compared to $11 million and $32 million for the same periods in 2016.

(4) Primarily represents the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments, transfers to held-for-sale and certain other reclassifications.

Table 48 Allowance for Credit Losses (continued)

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Loan and allowance ratios:				
Loans and leases outstanding at September 30 (5)	$920,832	$896,900	$920,832	$896,900
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at September 30 (5)	1.16 %	1.30 %	1.16 %	1.30 %
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at September 30 (6)	1.25	1.42	1.25	1.42
Commercial allowance for loan and lease losses as a percentage of total commercial loans and leases outstanding at September 30 (7)	1.08	1.19	1.08	1.19
Average loans and leases outstanding (5)	$911,945	$892,207	$908,670	$889,498
Annualized net charge-offs as a percentage of average loans and leases outstanding (5, 8)	0.39 %	0.40 %	0.40 %	0.44 %
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding (5)	0.42	0.43	0.43	0.48
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at September 30 (5, 9)	163	140	163	140
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs (8)	3.00	3.31	2.92	2.98
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs and PCI write-offs	2.77	3.03	2.76	2.73
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at September 30 (10)	$3,880	$4,068	$3,880	$4,068
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 (5, 10)	104 %	91 %	104 %	91 %
Loan and allowance ratios excluding PCI loans and the related valuation allowance: (11)				
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at September 30 (5)	1.14 %	1.27 %	1.14 %	1.27 %
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at September 30 (6)	1.21	1.36	1.21	1.36
	0.40	0.40	0.41	0.45

Annualized net charge-offs as a percentage of average loans and leases outstanding (5)				
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at September 30 (5, 9)	158	135	158	135
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs	2.91	3.18	2.83	2.86

(5) Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of $6.3 billion and $8.1 billion at September 30, 2017 and 2016. Average loans accounted for under the fair value option were $6.2 billion and $7.0 billion for the three and nine months ended September 30, 2017 compared to $8.4 billion and $8.3 billion for the same periods in 2016.

(6) Excludes consumer loans accounted for under the fair value option of $978 million and $1.8 billion at September 30, 2017 and 2016.

(7) Excludes commercial loans accounted for under the fair value option of $5.3 billion and $6.3 billion at September 30, 2017 and 2016.

(8) Net charge-offs exclude $73 million and $161 million of write-offs in the PCI loan portfolio for the three and nine months ended September 30, 2017 compared to $83 million and $270 million for the same periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(9) For more information on our definition of nonperforming loans, see pages 48 and 52.

(10) 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.

(11) 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.

For reporting purposes, we allocate the allowance for credit losses across products as presented in Table 49.

Table 49 Allocation of the Allowance for Credit Losses by Product Type

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Amount	Percent of Total	Percent of Loans and Leases Outstanding [1]	Amount	Percent of Total	Percent of Loans and Leases Outstanding [1]
Allowance for loan and lease losses						
Residential mortgage	$813	7.60 %	0.41 %	$1,012	8.82 %	0.53 %
Home equity	1,219	11.40	2.04	1,738	15.14	2.62
U.S. credit card	3,263	30.52	3.52	2,934	25.56	3.18
Non-U.S. credit card	—	—	—	243	2.12	2.64
Direct/Indirect consumer	255	2.38	0.27	244	2.13	0.26
Other consumer	32	0.30	1.32	51	0.44	2.01
Total consumer	5,582	52.20	1.25	6,222	54.21	1.36
U.S. commercial [2]	3,199	29.92	1.08	3,326	28.97	1.17
Commercial real estate	956	8.94	1.60	920	8.01	1.60
Commercial lease financing	144	1.35	0.67	138	1.20	0.62
Non-U.S. commercial	812	7.59	0.85	874	7.61	0.98
Total commercial	5,111	47.80	1.08	5,258	45.79	1.16
Allowance for loan and lease losses [3]	10,693	100.00 %	1.16	11,480	100.00 %	1.26
Less: Allowance included in assets of	—			(243)		

business held for sale [(4)]		
Total allowance for loan and lease losses	10,693	11,237
Reserve for unfunded lending commitments	762	762
Allowance for credit losses	$11,455	$11,999

(1) 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 $615 million and $710 million and home equity loans of $363 million and $341 million at September 30, 2017 and December 31, 2016. Commercial loans accounted for under the fair value option included U.S. commercial loans of $2.8 billion and $2.9 billion and non-U.S. commercial loans of $2.5 billion and $3.1 billion at September 30, 2017 and December 31, 2016.

(2) Includes allowance for loan and lease losses for U.S. small business commercial loans of $422 million and $416 million at September 30, 2017 and December 31, 2016.

(3) Includes $315 million and $419 million of valuation allowance presented with the allowance for loan and lease losses related to PCI loans at September 30, 2017 and December 31, 2016.

(4) Represents allowance for loan and lease losses related to the non-U.S. credit card loan portfolio, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

Market Risk Management

For more information on our market risk management process, see Market Risk Management in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

Trading Risk Management

To evaluate risk arising from trading activities, the Corporation focuses on the actual and potential volatility of revenues generated by individual positions as well as portfolios of positions.

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. For more information on our trading risk management process, see Trading Risk Management in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

Table 50 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 we are 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 are excluded with prior regulatory approval. In addition, Table 50 presents our fair value option portfolio, which includes substantially all of 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 our total market-based portfolio VaR. Additionally, market risk VaR for trading activities as presented in Table 50 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 50 include market risk to which we are exposed from all business segments, excluding CVA and DVA. The majority of this portfolio is in the Global Markets segment. Table 50 presents period-end, average, high and low daily trading VaR for the three months ended September 30, 2017, June 30, 2017 and September 30, 2016, as well as average daily trading VaR for the nine months ended September 30, 2017 and 2016, using a 99 percent confidence level.

Table 50 Market Risk VaR for Trading Activities

	Three Months Ended												Nine Months Ended	
	September 30, 2017				June 30, 2017				September 30, 2016				September 30	
(Dollars in millions)	Period End	Average	High (1)	Low (1)	Period End	Average	High (1)	Low (1)	Period End	Average	High (1)	Low (1)	2017 Average	2016 Average
Foreign exchange	$6	$ 10	$ 15	$ 5	$11	$ 13	$ 25	$ 3	$7	$ 8	$ 11	$ 6	$12	$ 9
Interest rate	15	21	41	14	18	23	33	15	15	20	25	15	20	21
Credit	24	25	29	23	26	25	29	22	31	29	37	25	25	30
Equity	17	17	33	12	19	18	26	13	16	17	24	11	18	19
Commodity	4	5	7	4	6	6	9	4	8	7	10	5	5	6
Portfolio diversification	(40)	(44)	—	—	(45)	(47)	—	—	(45)	(47)	—	—	(45)	(47)
Total covered positions trading portfolio	26	34	51	24	35	38	53	26	32	34	46	28	35	38
Impact from less liquid exposures	3	7	—	—	3	5	—	—	12	6	—	—	6	5
Total market-based trading portfolio	29	41	63	26	38	43	60	32	44	40	50	31	41	43
Fair value option loans	10	10	12	9	9	10	12	9	16	18	23	16	11	26
Fair value option hedges	8	8	9	6	6	5	7	4	7	8	11	6	6	13
Fair value option portfolio diversification	(11)	(9)	—	—	(6)	(6)	—	—	(12)	(15)	—	—	(8)	(24)
Total fair value option portfolio	7	9	10	7	9	9	11	8	11	11	16	9	9	15
Portfolio diversification	(4)	(3)	—	—	(5)	(4)	—	—	(3)	(4)	—	—	(4)	(8)

Total market-based portfolio	$32	$ 47	69	29	$42	$ 48	66	36	$52	$ 47	61	36	$46	$ 50	

(1) 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, is not relevant.

The graph below presents the daily total market-based trading portfolio VaR for the previous five quarters, corresponding to the data in Table 50.

Additional VaR statistics produced within our single VaR model are provided in Table 51 at the same level of detail as in Table 50. 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 51 presents average trading VaR statistics at 99 percent and 95 percent confidence levels for the three months ended September 30, 2017, June 30, 2017 and September 30, 2016.

Table 51 Average Market Risk VaR for Trading Activities – 99 percent and 95 percent VaR Statistics

	Three Months Ended					
	September 30, 2017		June 30, 2017		September 30, 2016	
(Dollars in millions)	99 percent	95 percent	99 percent	95 percent	99 percent	95 percent
Foreign exchange	$10	$ 6	$13	$ 7	$ 8	$ 4
Interest rate	21	14	23	16	20	13
Credit	25	15	25	15	29	18
Equity	17	9	18	9	17	10
Commodity	5	3	6	4	7	4
Portfolio diversification	(44)	(30)	(47)	(30)	(47)	(30)
Total covered positions trading portfolio	34	17	38	21	34	19
Impact from less liquid exposures	7	2	5	2	6	3
Total market-based trading portfolio	41	19	43	23	40	22
Fair value option loans	10	6	10	6	18	10
Fair value option hedges	8	6	5	4	8	6
Fair value option portfolio diversification	(9)	(7)	(6)	(5)	(15)	(9)
Total fair value option portfolio	9	5	9	5	11	7
Portfolio diversification	(3)	(3)	(4)	(3)	(4)	(3)
	$47	$ 21	$48	$ 25	$ 47	$ 26

Total
market-based
portfolio

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. For more information on our backtesting process, see Trading Risk Management – Backtesting in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

During the three and nine months ended September 30, 2017, there were no days in which there was a backtesting excess for our total market-based portfolio VaR, utilizing a one-day holding period.

Total Trading-related Revenue

Total trading-related revenue, excluding brokerage fees, and CVA, DVA and funding valuation adjustment (FVA) gains (losses), represents 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.

The following histogram is a graphic depiction of trading volatility and illustrates the daily level of trading-related revenue for the three months ended September 30, 2017 compared to the three months ended June 30, 2017 and March 31, 2017. During the three months ended September 30, 2017, positive trading-related revenue was recorded for 100 percent of the trading days, of which 77 percent were daily trading gains of over $25 million. This compares to the three months ended June 30, 2017, where positive trading-related revenue was recorded for all of the trading days, of which 80 percent were daily trading gains of over $25 million. During the three months ended March 31, 2017, positive trading-related revenue was recorded for all of the trading days, of which 89 percent were daily trading gains of over $25 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. For additional information, see Trading Risk Management – Trading Portfolio Stress Testing in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

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, maturity characteristics and investment securities premium amortization. Our overall goal is to manage interest rate risk so that movements in interest rates do not significantly adversely affect earnings and capital.

Table 52 presents the spot and 12-month forward rates used in our baseline forecasts at September 30, 2017 and December 31, 2016.

Table 52 Forward Rates

	September 30, 2017		
	Federal Funds	Three-month LIBOR	10-Year Swap
Spot rates	1.25 %	1.33 %	2.29 %
12-month forward rates	1.75	1.77	2.40
	December 31, 2016		
Spot rates	0.75 %	1.00 %	2.34 %
12-month forward rates	1.25	1.51	2.49

Table 53 shows the pre-tax dollar impact to forecasted net interest income over the next 12 months from September 30, 2017 and December 31, 2016, resulting from instantaneous parallel and non-parallel shocks to the market-based forward curve. Periodically we evaluate the scenarios presented so that they are meaningful in the context of the current rate environment.

In the nine months ended September 30, 2017, the asset sensitivity of our balance sheet to rising rates was largely unchanged. 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 available-for-sale (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 29.

Table 53 Estimated Banking Book Net Interest Income Sensitivity

(Dollars in millions) Curve Change	Short Rate (bps)	Long Rate (bps)	September 30 2017	December 31 2016
Parallel Shifts				
+100 bps instantaneous shift	+100	+100	$ 3,234	$ 3,370
-50 bps instantaneous shift	-50	-50	(2,306)	(2,900)
Flatteners				
Short-end instantaneous change	+100	—	2,203	2,473
Long-end instantaneous change	—	-50	(1,166)	(961)
Steepeners				
Short-end instantaneous change	-50	—	(1,125)	(1,918)
Long-end instantaneous change	—	+100	1,042	928

The sensitivity analysis in Table 53 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 53 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 our 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, 2017 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.

Table 54 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, 2017 and December 31, 2016. These amounts do not include derivative hedges on our MSRs.

Table 54 Asset and Liability Management Interest Rate and Foreign Exchange Contracts

		September 30, 2017 Expected Maturity							
(Dollars in millions, average estimated duration in years)	Fair Value	Total	Remainder of 2017	2018	2019	2020	2021	Thereafter	Average Estimated Duration
Receive-fixed interest rate swaps (1)	$3,591								5.31
Notional amount		$151,504	$5,780	$21,850	$21,783	$15,115	$5,307	$81,669	
Weighted-average fixed-rate		2.50 %	3.60 %	3.20 %	1.87 %	1.87 %	3.18 %	2.48 %	
Pay-fixed interest rate swaps (1)	(202)								5.63
Notional amount		$25,330	$—	$6,408	$—	$—	$—	$18,922	
Weighted-average fixed-rate		2.09 %	— %	1.60 %	— %	— %	— %	2.26 %	
Same-currency basis swaps (2)	(29)								
Notional amount		$43,551	$4,935	$11,028	$6,790	$1,180	$2,809	$16,809	
Foreign exchange basis swaps (1, 3, 4)	(1,830)								
Notional amount		113,011	5,294	24,124	11,947	13,325	9,393	48,928	
Option products (5)	6								
Notional amount (6)		1,869	671	1,182	—	—	—	16	
Foreign exchange contracts (1, 4, 7)	1,463								

Notional amount (6)		3,623	(6,908)	(6,169)	2,201	(20)	2,438	12,081	
Net ALM contracts	$2,999								

		December 31, 2016 Expected Maturity							
(Dollars in millions, average estimated duration in years)	Fair Value	Total	2017	2018	2019	2020	2021	Thereafter	Average Estimated Duration
Receive-fixed interest rate swaps (1)	$4,055								4.81
Notional amount		$118,603	$21,453	$25,788	$10,283	$7,515	$5,307	$48,257	
Weighted-average fixed-rate		2.83 %	3.64 %	2.81 %	2.31 %	2.07 %	3.18 %	2.67 %	
Pay-fixed interest rate swaps (1)	159								2.77
Notional amount		$22,400	$1,527	$9,168	$2,072	$7,975	$213	$1,445	
Weighted-average fixed-rate		1.37 %	1.84 %	1.47 %	0.97 %	1.08 %	1.00 %	2.45 %	
Same-currency basis swaps (2)	(26)								
Notional amount		$59,274	$20,775	$11,027	$6,784	$1,180	$2,799	$16,709	
Foreign exchange basis swaps (1, 3, 4)	(4,233)								
Notional amount		125,522	26,509	22,724	12,178	12,150	8,365	43,596	
Option products (5)	5								
Notional amount (6)		1,687	1,673	—	—	—	—	14	
Foreign exchange	3,180								

contracts (1, 4, 7)								
Notional amount (6)		(20,285)	(30,199)	197	1,961	(8)	881	6,883
Futures and forward rate contracts	19							
Notional amount (6)		37,896	37,896	—	—	—	—	—
Net ALM contracts	$3,159							

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

(2) At September 30, 2017 and December 31, 2016, the notional amount of same-currency basis swaps included $43.6 billion and $59.3 billion in both foreign currency and U.S. dollar-denominated basis swaps in which both sides of the swap are in the same currency.

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

(4) 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.

(5) The notional amount of option products of $1.9 billion and $1.7 billion at September 30, 2017 and December 31, 2016 was substantially all in foreign exchange options.

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

(7) The notional amount of foreign exchange contracts of $3.6 billion at September 30, 2017 was comprised of $41.7 billion in foreign currency-denominated and cross-currency receive-fixed swaps, $(32.6) billion in net foreign currency forward rate contracts, $(6.5) billion in foreign currency-denominated pay-fixed swaps and $1.0 billion in net foreign currency futures contracts. Foreign exchange contracts of $(20.3) billion at December 31, 2016 were comprised of $21.5 billion in foreign currency-denominated and cross-currency receive-fixed swaps, $(38.5) billion in net foreign currency forward rate contracts, $(4.6) billion in foreign currency-denominated pay-fixed swaps and $1.3 billion in foreign currency futures contracts.

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 $1.2 billion and $1.4 billion, on a pre-tax basis, at September 30, 2017 and December 31, 2016. 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, 2017, the pre-tax net losses are expected to be reclassified into earnings as follows: $164 million, or 14 percent within the next year, 51 percent in years two through five, and 23 percent in years six through 10, with the remaining 12 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, 2017.

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. Changes in interest rates and other market factors impact the volume of mortgage originations. Changes in interest rates also impact the value of IRLCs and the related residential first mortgage LHFS between the date of the IRLC and the date the loans are sold to the secondary market. An increase in mortgage interest rates typically leads to a decrease in the value of these instruments. Conversely, the value of the MSRs will increase driven by lower prepayment expectations when there is an increase in interest rates. 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 consisting of derivative contracts and securities.

For the three and nine months ended September 30, 2017, we recorded gains in mortgage banking income of $34 million and $100 million related to the change in fair value of the MSRs, IRLCs and LHFS, net of gains and losses on the hedge portfolio, compared to gains of $136 million and $318 million for the same periods in 2016. For more information on MSRs, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements and for more information on mortgage banking income, see Consumer Banking on page 14.

Complex Accounting Estimates

Our significant accounting principles 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. For additional information, see Complex Accounting Estimates of the MD&A of the Corporation's 2016 Annual Report on Form 10-K and Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Non-GAAP Reconciliations

Tables 55 and 56 provide reconciliations of certain non-GAAP financial measures to GAAP financial measures.

Table 55 Quarterly and Year-to-Date Supplemental Financial Data and Reconciliations to GAAP Financial Measures

	Three Months Ended September 30					
	2017			2016		
(Dollars in millions)	As Reported	Fully taxable-equivalent adjustment	Fully taxable-equivalent basis	As Reported	Fully taxable-equivalent adjustment	Fully taxable-equivalent basis
Net interest income	$11,161	$ 240	$ 11,401	$10,201	$ 228	$ 10,429
Total revenue, net of interest expense	21,839	240	22,079	21,635	228	21,863
Income tax expense	2,279	240	2,519	2,349	228	2,577
	Nine Months Ended September 30					
	2017			2016		
Net interest income	$33,205	$ 674	$ 33,879	$30,804	$ 666	$ 31,470
Total revenue, net of interest expense	66,916	674	67,590	63,711	666	64,377
Income tax expense	7,096	674	7,770	5,888	666	6,554

Table 56 Period-end and Average Supplemental Financial Data and Reconciliations to GAAP Financial Measures

	Period-end		Average			
			Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	September 30 2017	December 31 2016	2017	2016	2017	2016
Common shareholders'	$250,136	$241,620	$249,624	$243,679	$246,195	$240,440

equity						
Goodwill	(68,968)	(69,744)	(68,969)	(69,744)	(69,398)	(69,752)
Intangible assets (excluding MSRs)	(2,459)	(2,989)	(2,549)	(3,276)	(2,737)	(3,480)
Related deferred tax liabilities	1,435	1,545	1,465	1,628	1,503	1,666
Tangible common shareholders' equity	$180,144	$170,432	$179,571	$172,287	$175,563	$168,874
Shareholders' equity	$272,459	$266,840	$273,648	$268,899	$271,012	$264,907
Goodwill	(68,968)	(69,744)	(68,969)	(69,744)	(69,398)	(69,752)
Intangible assets (excluding MSRs)	(2,459)	(2,989)	(2,549)	(3,276)	(2,737)	(3,480)
Related deferred tax liabilities	1,435	1,545	1,465	1,628	1,503	1,666
Tangible shareholders' equity	$202,467	$195,652	$203,595	$197,507	$200,380	$193,341
Total assets	$2,283,896	$2,187,702				
Goodwill	(68,968)	(69,744)				
Intangible assets (excluding MSRs)	(2,459)	(2,989)				
Related deferred tax liabilities	1,435	1,545				
Tangible assets	$2,213,904	$2,116,514				

Item 3. Quantitative and Qualitative Disclosures about Market Risk

See Market Risk Management on page 60 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 Exchange Act). 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, 2017, that have materially affected, or are reasonably likely to materially affect, the Corporation's internal control over financial reporting.

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)	2017	2016	2017	2016
Interest income				
Loans and leases	$9,203	$ 8,358	$26,877	$ 24,837
Debt securities	2,629	2,144	7,764	6,922
Federal funds sold and securities borrowed or purchased under agreements to resell	659	267	1,658	803
Trading account assets	1,091	1,076	3,330	3,330
Other interest income	1,075	765	2,884	2,300
Total interest income	14,657	12,610	42,513	38,192
Interest expense				
Deposits	624	266	1,252	736
Short-term borrowings	944	569	2,508	1,808
Trading account liabilities	319	244	890	778
Long-term debt	1,609	1,330	4,658	4,066
Total interest expense	3,496	2,409	9,308	7,388
Net interest income	11,161	10,201	33,205	30,804
Noninterest income				
Card income	1,429	1,455	4,347	4,349
Service charges	1,968	1,952	5,863	5,660
Investment and brokerage services	3,303	3,160	9,882	9,543
Investment banking income	1,477	1,458	4,593	4,019
Trading account profits	1,837	2,141	6,124	5,821
Mortgage banking income (loss)	(20)	589	332	1,334
Gains on sales of debt securities	125	51	278	490
Other income	559	628	2,292	1,691
Total noninterest income	10,678	11,434	33,711	32,907
Total revenue, net of interest expense	21,839	21,635	66,916	63,711
Provision for credit losses	834	850	2,395	2,823
Noninterest expense				
Personnel	7,483	7,704	24,353	24,278
Occupancy	999	1,005	3,000	3,069
Equipment	416	443	1,281	1,357
Marketing	461	410	1,235	1,243
Professional fees	476	536	1,417	1,433
Amortization of intangibles	151	181	473	554
Data processing	777	685	2,344	2,240
Telecommunications	170	189	538	551
Other general operating	2,206	2,328	7,072	7,065

Total noninterest expense	13,139	13,481	41,713	41,790
Income before income taxes	7,866	7,304	22,808	19,098
Income tax expense	2,279	2,349	7,096	5,888
Net income	$5,587	$ 4,955	$15,712	$ 13,210
Preferred stock dividends	465	503	1,328	1,321
Net income applicable to common shareholders	$5,122	$ 4,452	$14,384	$ 11,889
Per common share information				
Earnings	$0.50	$ 0.43	$1.42	$ 1.15
Diluted earnings	0.48	0.41	1.35	1.10
Dividends paid	0.12	0.075	0.27	0.175
Average common shares issued and outstanding (in thousands)	10,197,891	10,250,124	10,103,386	10,312,878
Average diluted common shares issued and outstanding (in thousands)	10,725,482	11,000,473	10,820,425	11,046,807

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Comprehensive Income

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Net income	$5,587	$4,955	$15,712	$13,210
Other comprehensive income (loss), net-of-tax:				
Net change in debt and marketable equity securities	462	208	931	3,319
Net change in debit valuation adjustments	(80)	(65)	(149)	49
Net change in derivatives	24	127	156	277
Employee benefit plan adjustments	26	6	80	29
Net change in foreign currency translation adjustments	5	(8)	102	(17)
Other comprehensive income	437	268	1,120	3,657
Comprehensive income	$6,024	$5,223	$16,832	$16,867

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Balance Sheet

(Dollars in millions)	September 30 2017	December 31 2016
Assets		
Cash and due from banks	$30,819	$30,719
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	141,562	117,019
Cash and cash equivalents	172,381	147,738
Time deposits placed and other short-term investments	9,493	9,861
Federal funds sold and securities borrowed or purchased under agreements to resell (includes $56,780 and $49,750 measured at fair value)	217,214	198,224
Trading account assets (includes $119,458 and $106,057 pledged as collateral)	210,319	180,209
Derivative assets	38,384	42,512
Debt securities:		
Carried at fair value (includes $32,146 and $29,804 pledged as collateral)	316,864	313,660
Held-to-maturity, at cost (fair value – $121,185 and $115,285; $5,043 and $8,233 pledged as collateral)	122,345	117,071
Total debt securities	439,209	430,731
Loans and leases (includes $6,285 and $7,085 measured at fair value and $36,362 and $31,805 pledged as collateral)	927,117	906,683
Allowance for loan and lease losses	(10,693)	(11,237)
Loans and leases, net of allowance	916,424	895,446
Premises and equipment, net	8,971	9,139
Mortgage servicing rights	2,407	2,747
Goodwill	68,968	68,969
Intangible assets	2,459	2,922
Loans held-for-sale (includes $3,128 and $4,026 measured at fair value)	13,243	9,066
Customer and other receivables (includes $230 measured at fair value at September 30, 2017)	55,855	58,759
Assets of business held for sale (includes $619 measured at fair value at December 31, 2016)	—	10,670
Other assets (includes $19,341 and $13,802 measured at fair value)	128,569	120,709
Total assets	$2,283,896	$2,187,702

Assets of consolidated variable interest entities included in total assets above (isolated to settle the liabilities of the variable interest entities)		
Trading account assets	$5,142	$5,773
Loans and leases	50,022	56,001
Allowance for loan and lease losses	(1,023)	(1,032)
Loans and leases, net of allowance	48,999	54,969
Loans held-for-sale	66	188
All other assets	662	1,596
Total assets of consolidated variable interest entities	$54,869	$62,526

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Balance Sheet (continued)

(Dollars in millions)	September 30 2017	December 31 2016
Liabilities		
Deposits in U.S. offices:		
Noninterest-bearing	$429,861	$438,125
Interest-bearing (includes $468 and $731 measured at fair value)	776,756	750,891
Deposits in non-U.S. offices:		
Noninterest-bearing	14,126	12,039
Interest-bearing	63,674	59,879
Total deposits	1,284,417	1,260,934
Federal funds purchased and securities loaned or sold under agreements to repurchase (includes $38,852 and $35,766 measured at fair value)	189,790	170,291
Trading account liabilities	86,434	63,031
Derivative liabilities	31,781	39,480
Short-term borrowings (includes $1,904 and $2,024 measured at fair value)	32,679	23,944
Accrued expenses and other liabilities (includes $22,369 and $14,630 measured at fair value and $762 and $762 of reserve for unfunded lending commitments)	157,670	146,359
Long-term debt (includes $29,897 and $30,037 measured at fair value)	228,666	216,823
Total liabilities	2,011,437	1,920,862
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)		
Shareholders' equity		
Preferred stock, $0.01 par value; authorized – 100,000,000 shares; issued and outstanding – 3,837,683 and 3,887,329 shares	22,323	25,220
Common stock and additional paid-in capital, $0.01 par value; authorized – 12,800,000,000 shares; issued and outstanding – 10,457,473,674 and 10,052,625,604 shares	142,818	147,038
Retained earnings	113,486	101,870
Accumulated other comprehensive income (loss)	(6,168)	(7,288)
Total shareholders' equity	272,459	266,840
Total liabilities and shareholders' equity	$2,283,896	$2,187,702
Liabilities of consolidated variable interest entities included in total liabilities above		
Short-term borrowings	$122	$348
Long-term debt (includes $9,398 and $10,417 of non-recourse debt)	9,457	10,646
All other liabilities (includes $52 and $38 of non-recourse liabilities)	54	41
Total liabilities of consolidated variable interest entities	$9,633	$11,035

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Changes in Shareholders' Equity

(Dollars in millions, shares in thousands)	Preferred Stock	Common Stock and Additional Paid-in Capital Shares	Common Stock and Additional Paid-in Capital Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
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, net, 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
Balance, December 31, 2016	$25,220	10,052,626	$147,038	$101,870	$ (7,288)	$266,840
Net income				15,712		15,712
Net change in debt and marketable equity securities					931	931
Net change in debit valuation adjustments					(149)	(149)
Net change in derivatives					156	156
Employee benefit plan adjustments					80	80
Net change in foreign currency translation adjustments					102	102
Dividends declared:						
Common				(2,768)		(2,768)
Preferred				(1,292)		(1,292)
Common stock issued in connection with exercise of warrants and exchange of preferred stock	(2,897)	700,000	2,933	(36)		—
Common stock issued under employee plans, net and other		39,496	792			792
Common stock repurchased		(334,648)	(7,945)			(7,945)
Balance, September 30, 2017	$22,323	10,457,474	$142,818	$113,486	$ (6,168)	$272,459

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Cash Flows

	Nine Months Ended September 30	
(Dollars in millions)	2017	2016
Operating activities		
Net income	$15,712	$13,210
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	2,395	2,823
Gains on sales of debt securities	(278)	(490)
Depreciation and premises improvements amortization	1,115	1,138
Amortization of intangibles	473	554
Net amortization of premium/discount on debt securities	1,647	2,203
Deferred income taxes	5,043	5,072
Stock-based compensation	1,465	1,087
Loans held-for-sale:		
Originations and purchases	(31,404)	(24,154)
Proceeds from sales and paydowns of loans originally classified as held-for-sale	27,006	21,068
Net change in:		
Trading and derivative instruments	(11,844)	9,068
Other assets	(9,809)	(612)
Accrued expenses and other liabilities	11,201	(4,845)
Other operating activities, net	4,729	595
Net cash provided by operating activities	17,451	26,717
Investing activities		
Net change in:		
Time deposits placed and other short-term investments	368	(762)
Federal funds sold and securities borrowed or purchased under agreements to resell	(18,990)	(26,328)
Debt securities carried at fair value:		
Proceeds from sales	64,597	67,681
Proceeds from paydowns and maturities	71,628	81,404
Purchases	(134,915)	(156,537)
Held-to-maturity debt securities:		
Proceeds from paydowns and maturities	12,194	12,827
Purchases	(17,850)	(29,085)
Loans and leases:		
Proceeds from sales	8,643	14,870
Purchases	(4,511)	(9,347)
Other changes in loans and leases, net	(29,654)	(17,832)
Other investing activities, net	8,451	109
Net cash used in investing activities	(40,039)	(63,000)
Financing activities		
Net change in:		
Deposits	23,483	35,636
Federal funds purchased and securities loaned or sold under agreements to repurchase	19,987	3,904
Short-term borrowings	8,583	(1,069)
Long-term debt:		
Proceeds from issuance	50,702	24,681

Retirement of long-term debt	(44,724)	(41,458)
Preferred stock: Proceeds from issuance	—	2,947
Common stock repurchased	(7,945)	(3,782)
Cash dividends paid	(4,124)	(3,031)
Other financing activities, net	(609)	(58)
Net cash provided by financing activities	45,353	17,770
Effect of exchange rate changes on cash and cash equivalents	1,878	2,594
Net increase (decrease) in cash and cash equivalents	24,643	(15,919)
Cash and cash equivalents at January 1	147,738	159,353
Cash and cash equivalents at September 30	$172,381	$143,434

See accompanying Notes to Consolidated Financial Statements.

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.
These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements of the Corporation's 2016 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. Certain prior-period amounts have been reclassified to conform to current period presentation.
On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business to a third party. The Corporation has indemnified the purchaser for substantially all payment protection insurance (PPI) exposure above reserves assumed by the purchaser. The impact of the sale was an after-tax gain of $103 million, and is presented in the Consolidated Statement of Income as other income of $793 million and an income tax expense of $690 million. The income tax expense was related to gains on the derivatives used to hedge the currency risk of the net investment. Total cash proceeds from the sale were $10.9 billion. The assets of the business sold primarily included consumer credit card receivables of $9.8 billion and $9.2 billion

at June 1, 2017 and December 31, 2016 and goodwill of $775 million at both of those period ends. This business was included in All Other.
New Accounting Pronouncements
Accounting for Financial Instruments -- Credit Losses
The Financial Accounting Standards Board (FASB) issued a new accounting standard effective on January 1, 2020, with early adoption permitted on January 1, 2019, 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. The standard also requires expanded credit quality disclosures, including credit quality indicators disaggregated by vintage. The Corporation is in the process of identifying and implementing required changes to loan loss estimation models and processes and evaluating the impact of this new accounting standard, which at the date of adoption is expected to increase the allowance for credit losses with a resulting negative adjustment to retained earnings.
Hedge Accounting
The FASB issued a new accounting standard effective on January 1, 2019, with early adoption permitted, that makes targeted improvements to simplify the application of hedge accounting guidance. The Corporation is evaluating the timing of adoption. The ongoing implementation efforts include identifying current hedge strategies and systems and

processes that will need to be modified to comply with the standard, which could impact the timing of adoption. The Corporation does not expect the new accounting standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

Lease Accounting

The FASB issued a new accounting standard effective on January 1, 2019 that requires substantially all leases to be recorded as assets and liabilities on the balance sheet. This new accounting standard uses a modified retrospective transition that will be applied to all prior periods presented. The Corporation is in the process of reviewing its existing lease portfolios, as well as other service contracts for embedded leases, to evaluate the impact of the new accounting standard on the financial statements, as well as the impact to regulatory capital and risk-weighted assets. The effect of the adoption will depend on its lease portfolio at the time of transition; however, the Corporation does not expect the new accounting standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

The FASB issued a new accounting standard effective on January 1, 2018, with early adoption permitted for the provisions related to debit valuation adjustments (DVA), on recognition and measurement of financial instruments, including certain equity investments and financial liabilities recorded at fair value under the fair value option. In 2015, the Corporation early adopted, retrospective to January 1, 2015, the provisions of this new accounting standard related to DVA on financial liabilities accounted for under the fair value option. The Corporation does not expect the remaining provisions of this new accounting standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

Revenue Recognition

The FASB issued a new accounting standard effective on January 1, 2018 for recognizing revenue from contracts with customers. The customer contracts within the scope of the new standard have been identified, and the Corporation's current evaluation indicates that the new standard will not impact the timing or measurement of its revenue recognition. The Corporation continues to evaluate the presentation of certain costs as either operating expenses or net against noninterest income; consequently, there may be an insignificant change in the Consolidated Statement of Income for the presentation of these costs. Overall, the Corporation does not expect the new accounting standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

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 2016 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, 2017 and December 31, 2016. 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.

		September 30, 2017					
		Gross Derivative Assets			Gross Derivative Liabilities		
(Dollars in billions)	Contract/ Notional [1]	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total
Interest rate contracts							
Swaps [2]	$ 18,602.5	$ 179.5	$ 5.1	$ 184.6	$ 176.7	$ 1.3	$ 178.0
Futures and forwards [2]	5,957.2	0.9	—	0.9	0.8	—	0.8
Written options	1,467.4	—	—	—	36.3	—	36.3
Purchased options	1,390.7	38.5	—	38.5	—	—	—
Foreign exchange contracts							
Swaps	2,011.9	36.6	2.5	39.1	37.0	3.1	40.1
Spot, futures and forwards	4,313.6	46.6	0.9	47.5	46.9	0.8	47.7
Written options	367.3	—	—	—	5.7	—	5.7
Purchased options	335.7	5.2	—	5.2	—	—	—
Equity contracts							
Swaps	236.2	4.6	—	4.6	4.6	—	4.6
Futures and forwards	100.9	1.9	—	1.9	1.2	—	1.2
Written options	524.9	—	—	—	25.1	—	25.1
Purchased options	467.0	25.2	—	25.2	—	—	—
Commodity contracts							

Swaps	47.6	1.7	—	1.7	4.2	—	4.2
Futures and forwards	51.5	3.5	—	3.5	0.6	—	0.6
Written options	25.0	—	—	—	1.2	—	1.2
Purchased options	26.1	1.4	—	1.4	—	—	—
Credit derivatives (3)							
Purchased credit derivatives:							
Credit default swaps (2)	522.8	4.8	—	4.8	11.2	—	11.2
Total return swaps/other	57.6	0.1	—	0.1	1.3	—	1.3
Written credit derivatives:							
Credit default swaps (2)	514.5	10.9	—	10.9	4.2	—	4.2
Total return swaps/other	55.3	0.8	—	0.8	0.2	—	0.2
Gross derivative assets/liabilities		$362.2	$ 8.5	$370.7	$357.2	$ 5.2	$362.4
Less: Legally enforceable master netting agreements (2)				(296.7)			(296.7)
Less: Cash collateral received/paid (2)				(35.6)			(33.9)
Total derivative assets/liabilities				$38.4			$31.8

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

(2) Derivative assets and liabilities reflect the effects of contractual amendments by two central clearing counterparties to legally re-characterize daily cash variation margin from collateral, which secures an outstanding exposure, to settlement, which discharges an outstanding exposure. One of these central clearing counterparties amended its governing documents, which became effective in January 2017. In addition, the Corporation elected to transfer its existing positions to the settlement platform for the other central clearing counterparty in September 2017.

(3) The net derivative asset and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were $6.2 billion and $494.1 billion at September 30, 2017.

(Dollars in billions)	Contract/ Notional [1]	December 31, 2016 Gross Derivative Assets Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Gross Derivative Liabilities Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total
Interest rate contracts							
Swaps	$ 16,977.7	$385.0	$ 5.9	$390.9	$386.9	$ 2.0	$388.9
Futures and forwards	5,609.5	2.2	—	2.2	2.1	—	2.1
Written options	1,146.2	—	—	—	52.2	—	52.2
Purchased options	1,178.7	53.3	—	53.3	—	—	—
Foreign exchange contracts							
Swaps	1,828.6	54.6	4.2	58.8	58.8	6.2	65.0
Spot, futures and forwards	3,410.7	58.8	1.7	60.5	56.6	0.8	57.4
Written options	356.6	—	—	—	9.4	—	9.4
Purchased options	342.4	8.9	—	8.9	—	—	—
Equity contracts							
Swaps	189.7	3.4	—	3.4	4.0	—	4.0
Futures and forwards	68.7	0.9	—	0.9	0.9	—	0.9
Written options	431.5	—	—	—	21.4	—	21.4
Purchased options	385.5	23.9	—	23.9	—	—	—
Commodity contracts							
Swaps	48.2	2.5	—	2.5	5.1	—	5.1
Futures and forwards	49.1	3.6	—	3.6	0.5	—	0.5
Written options	29.3	—	—	—	1.9	—	1.9
Purchased options	28.9	2.0	—	2.0	—	—	—
Credit derivatives [2]							
Purchased credit derivatives:							
Credit default swaps	604.0	8.1	—	8.1	10.3	—	10.3
Total return swaps/other	21.2	0.4	—	0.4	1.5	—	1.5
Written credit derivatives:							
Credit default swaps	614.4	10.7	—	10.7	7.5	—	7.5
Total return swaps/other	25.4	1.0	—	1.0	0.2	—	0.2
Gross derivative assets/liabilities		$619.3	$ 11.8	$631.1	$619.3	$ 9.0	$628.3
Less: Legally enforceable master netting agreements				(545.3)			(545.3)
Less: Cash collateral received/paid				(43.3)			(43.5)
Total derivative assets/liabilities				$42.5			$39.5

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

(2) The net derivative asset and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were $2.2 billion and $548.9 billion at December 31, 2016.

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 additional information on the offsetting of derivative assets and liabilities, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The following table presents derivative instruments included in derivative assets and liabilities on the Consolidated Balance Sheet at September 30, 2017 and December 31, 2016 by primary risk (e.g., interest rate risk) and the platform, where applicable, on which these derivatives are transacted. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total gross derivative assets and liabilities 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.
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 [1]

	September 30, 2017		December 31, 2016	
(Dollars in billions)	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
Interest rate contracts				
Over-the-counter	$219.1	$ 211.3	$267.3	$ 258.2
Over-the-counter cleared [2]	2.3	2.3	177.2	182.8
Foreign exchange contracts				
Over-the-counter	88.2	90.7	124.3	126.7
Over-the-counter cleared	0.7	0.6	0.3	0.3
Equity contracts				
Over-the-counter	18.3	17.3	15.6	13.7
Exchange-traded	9.5	9.7	11.4	10.8
Commodity contracts				
Over-the-counter	2.7	4.0	3.7	4.9
Exchange-traded	0.7	0.6	1.1	1.0
Credit derivatives				
Over-the-counter	10.1	10.5	15.3	14.7
Over-the-counter cleared [2]	6.1	6.0	4.3	4.3
Total gross derivative assets/liabilities, before netting				
Over-the-counter	338.4	333.8	426.2	418.2
Exchange-traded	10.2	10.3	12.5	11.8
Over-the-counter cleared [2]	9.1	8.9	181.8	187.4
Less: Legally enforceable master netting agreements and cash collateral received/paid				
Over-the-counter	(314.9)	(312.8)	(398.2)	(392.6)
Exchange-traded	(9.2)	(9.2)	(8.9)	(8.9)
Over-the-counter cleared [2]	(8.2)	(8.6)	(181.5)	(187.3)
Derivative assets/liabilities, after netting	25.4	22.4	31.9	28.6
Other gross derivative assets/liabilities [3]	13.0	9.4	10.6	10.9
Total derivative assets/liabilities	38.4	31.8	42.5	39.5
Less: Financial instruments collateral [4]	(11.3)	(9.6)	(13.5)	(10.5)
Total net derivative assets/liabilities	$27.1	$ 22.2	$29.0	$ 29.0

(1) 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, and exchange-traded derivatives include listed options transacted on an exchange.

(2) Derivative assets and liabilities reflect the effects of contractual amendments by two central clearing counterparties to legally re-characterize daily cash variation margin from collateral, which secures an outstanding exposure, to settlement, which discharges an outstanding exposure. One of these central clearing counterparties amended its governing documents, which became effective in January 2017. In addition, the Corporation elected to transfer its existing positions to the settlement platform for the other central clearing counterparty in September 2017.

(3) Consists of derivatives entered into under master netting agreements where the enforceability of these agreements is uncertain under bankruptcy laws in some countries or industries.

(4) Amounts are limited to the derivative asset/liability balance and, accordingly, do not include excess collateral received/pledged. Financial instruments collateral includes securities collateral received or pledged and cash securities held and posted at third-party custodians that are not offset on the Consolidated Balance Sheet but shown as a reduction to derive net derivative assets and liabilities.

ALM and Risk Management Derivatives

The Corporation's asset and liability management (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. For additional information, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

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 following table summarizes information related to fair value hedges for the three and nine months ended September 30, 2017 and 2016, 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, 2017			Nine Months Ended September 30, 2017		
(Dollars in millions)	Derivative	Hedged Item	Hedge Ineffectiveness	Derivative	Hedged Item	Hedge Ineffectiveness
Interest rate risk on long-term debt [1]	$(273)	$169	$ (104)	$(751)	$313	$ (438)
Interest rate and foreign currency risk on long-term debt [1]	607	(593)	14	1,631	(1,603)	28
Interest rate risk on available-for-sale securities [2]	(8)	7	(1)	(71)	40	(31)
Price risk on commodity inventory [3]	—	(1)	(1)	8	(8)	—
Total	$326	$(418)	$ (92)	$817	$(1,258)	$ (441)
	Three Months Ended September 30, 2016			Nine Months Ended September 30, 2016		
Interest rate risk on long-term debt [1]	$(758)	$580	$ (178)	$3,166	$(3,654)	$ (488)
Interest rate and foreign currency risk on long-term debt [1]	16	(10)	6	360	(369)	(9)
Interest rate risk on available-for-sale securities [2]	235	(250)	(15)	(131)	80	(51)
Price risk on commodity inventory [3]	6	(6)	—	—	—	—
Total	$(501)	$314	$ (187)	$3,395	$(3,943)	$ (548)

(1) Amounts are recorded in interest expense on long-term debt and in other income.
(2) Amounts are recorded in interest income on debt securities.
(3) Amounts relating to commodity inventory are recorded in trading account profits.

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, 2017 and 2016. Of the $739 million after-tax net loss ($1.2 billion pre-tax) on derivatives in accumulated other comprehensive income (OCI) at September 30, 2017, $102 million after-tax ($164 million pre-tax) 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 the majority of the forecasted transactions are hedged is approximately seven years, with a maximum length of time for certain forecasted transactions of 19 years.

Derivatives Designated as Cash Flow and Net Investment Hedges

	Three Months Ended September 30, 2017			Nine Months Ended September 30, 2017		
(Dollars in millions, amounts pre-tax)	Gains (Losses) Recognized in Accumulated OCI on Derivatives	Gains (Losses) in Income Reclassified from Accumulated OCI	Hedge Ineffectiveness and Amounts Excluded from Effectiveness Testing [1]	Gains (Losses) Recognized in Accumulated OCI on Derivatives	Gains (Losses) in Income Reclassified from Accumulated OCI	Hedge Ineffectiveness and Amounts Excluded from Effectiveness Testing [1]
Cash flow hedges						

Interest rate risk on variable-rate portfolios	$11	$ (54)	$ (1)	$38	$ (274)	$ 4
Price risk on restricted stock awards [2]	7	32	—	41	103	—
Total	$18	$ (22)	$ (1)	$79	$ (171)	$ 4
Net investment hedges						
Foreign exchange risk [3]	$(427)	$ (3)	$ (33)	$(1,541)	$ 1,811	$ (82)

	Three Months Ended September 30, 2016			Nine Months Ended September 30, 2016		
Cash flow hedges						
Interest rate risk on variable-rate portfolios	$(8)	$ (119)	$ (4)	$50	$ (447)	$ 2
Price risk on restricted stock awards [2]	85	(8)	—	(114)	(61)	—
Total	$77	$ (127)	$ (4)	$(64)	$ (508)	$ 2
Net investment hedges						
Foreign exchange risk	$214	$ 2	$ (68)	$173	$ 3	$ (234)

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

(2) Gains (losses) recognized in accumulated OCI are primarily related to the change in the Corporation’s stock price for the period.

(3) For the nine months ended September 30, 2017, substantially all of the gains in income reclassified from accumulated OCI were comprised of the gain recognized on derivatives used to hedge the currency risk of the Corporation's net investment in its non-U.S. consumer credit card business, which was sold during the second quarter of 2017. For additional information, see Note 12 – Accumulated Other Comprehensive Income (Loss).

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, 2017 and 2016. 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 Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Interest rate risk on mortgage banking income [(1)]	$ 1	$ 57	$ 32	$ 882
Credit risk on loans [(2)]	—	(7)	(3)	(103)
Interest rate and foreign currency risk on ALM activities [(3)]	26	(262)	(26)	(1,970)
Price risk on restricted stock awards [(4)]	33	199	161	(569)
Other	—	—	5	40

(1) Net gains on these derivatives are recorded in mortgage banking income as they are used to mitigate the interest rate risk related to mortgage servicing rights (MSRs), interest rate lock commitments (IRLCs) and mortgage loans held-for-sale, 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 $76 million and $192 million for the three and nine months ended September 30, 2017 compared to $185 million and $514 million for the same periods in 2016.

(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, 2017 and December 31, 2016, the Corporation transferred $6.2 billion and $6.6 billion of non-U.S. government-guaranteed mortgage-backed

securities (MBS) to a third-party trust and retained economic exposure to the transferred assets through derivative contracts. In connection with these transfers, the Corporation received gross cash proceeds of $6.2 billion and $6.6 billion at the transfer dates. At both September 30, 2017 and December 31, 2016, the fair value of the transferred securities was $6.3 billion. Derivative assets of $44 million and $43 million and liabilities of $5 million and $10 million were recorded at September 30, 2017 and December 31, 2016, and are included in credit derivatives in the derivative instruments table on page 75.

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. For more information on sales and trading revenue, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The following table, 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, 2017 and 2016. The difference between total trading account profits in the following table and in the Consolidated Statement of Income represents trading activities in business segments other than Global Markets. This table includes DVA and funding valuation adjustment (FVA) gains (losses). Global Markets results in Note 17 – Business Segment Information are presented on a fully taxable-equivalent (FTE) basis. The following table is not presented on an FTE basis.

Sales and Trading Revenue

	Three Months Ended September 30, 2017				Nine Months Ended September 30, 2017			
(Dollars in millions)	Trading Account Profits	Net Interest Income	Other [(1)]	Total	Trading Account Profits	Net Interest Income	Other [(1)]	Total
Interest rate risk	$441	$ 224	$91	$756	$1,115	$763	$325	$2,203
Foreign exchange risk	348	2	(40)	310	1,063	(2)	(119)	942
Equity risk	640	(142)	464	962	2,088	(372)	1,426	3,142
Credit risk	251	624	104	979	1,200	1,886	450	3,536
Other risk	34	8	17	59	168	18	67	253
Total sales and trading revenue	$1,714	$ 716	$636	$3,066	$5,634	$2,293	$2,149	$10,076
	Three Months Ended September 30, 2016				Nine Months Ended September 30, 2016			
Interest rate risk	$511	$ 307	$83	$901	$1,430	$1,073	$210	$2,713
Foreign exchange risk	319	(4)	(39)	276	1,003	(7)	(112)	884
Equity risk	463	31	467	961	1,481	15	1,573	3,069
Credit risk	598	634	123	1,355	1,224	1,895	380	3,499
Other risk	43	7	8	58	263	(19)	34	278
Total sales and trading revenue	$1,934	$ 975	$642	$3,551	$5,401	$2,957	$2,085	$10,443

(1) 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 $488 million and $1.5 billion for the three and nine months ended September 30, 2017 and $485 million and $1.6 billion for the same periods in 2016.

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 at September 30, 2017 and December 31, 2016 are summarized in the following table.

Credit Derivative Instruments

(Dollars in millions)	Less than One Year	One to Three Years	Three to Five Years	Over Five Years	Total
	September 30, 2017				
	Carrying Value				
Credit default swaps:					
Investment grade	$10	$27	$175	$389	$601
Non-investment grade	237	571	462	2,343	3,613
Total	247	598	637	2,732	4,214
Total return swaps/other:					
Investment grade	39	—	—	—	39
Non-investment grade	153	—	—	—	153
Total	192	—	—	—	192
Total credit derivatives	$439	$598	$637	$2,732	$4,406
Credit-related notes:					
Investment grade	$—	$—	$84	$702	$786
Non-investment grade	20	12	31	1,416	1,479
Total credit-related notes	$20	$12	$115	$2,118	$2,265
	Maximum Payout/Notional				
Credit default swaps:					
Investment grade	$76,594	$117,714	$109,875	$38,025	$342,208
Non-investment grade	62,935	43,775	44,094	21,466	172,270
Total	139,529	161,489	153,969	59,491	514,478
Total return swaps/other:					
Investment grade	36,743	—	—	—	36,743
Non-investment grade	13,232	4,792	143	404	18,571
Total	49,975	4,792	143	404	55,314
Total credit derivatives	$189,504	$166,281	$154,112	$59,895	$569,792

	December 31, 2016				
	Carrying Value				
Credit default swaps:					
Investment grade	$10	$64	$535	$783	$1,392
Non-investment grade	771	1,053	908	3,339	6,071
Total	781	1,117	1,443	4,122	7,463
Total return swaps/other:					
Investment grade	16	—	—	—	16
Non-investment grade	127	10	2	1	140
Total	143	10	2	1	156
Total credit derivatives	$924	$1,127	$1,445	$4,123	$7,619
Credit-related notes:					
Investment grade	$—	$12	$542	$1,423	$1,977
Non-investment grade	70	22	60	1,318	1,470
Total credit-related notes	$70	$34	$602	$2,741	$3,447
	Maximum Payout/Notional				
Credit default swaps:					
Investment grade	$121,083	$143,200	$116,540	$21,905	$402,728
Non-investment grade	84,755	67,160	41,001	18,711	211,627

Total	205,838	210,360	157,541	40,616	614,355
Total return swaps/other:					
Investment grade	12,792	—	—	—	12,792
Non-investment grade	6,638	5,127	589	208	12,562
Total	19,430	5,127	589	208	25,354
Total credit derivatives	$225,268	$215,487	$158,130	$40,824	$639,709

Credit derivatives 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.

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.

Credit-related notes in the table on page 81 include investments in securities issued by collateralized debt obligation (CDO), collateralized loan obligation 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 majority of the Corporation's derivative contracts contain credit-risk related features, primarily in the form of ISDA master netting agreements and credit support documentation that enhance the creditworthiness of these instruments. Therefore, events such as a credit rating downgrade 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. At September 30, 2017 and December 31, 2016, the Corporation held cash and securities collateral of $77.4 billion and $85.5 billion, and posted cash and securities collateral of $58.4 billion and $71.1 billion in the normal course of business under derivative agreements, excluding 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. At September 30, 2017, 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 $2.0 billion, including $1.2 billion for Bank of America, National Association. For more information on credit-related contingent features and collateral, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

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, 2017, the liability recorded for these derivative contracts was $23 million.

The following table presents the amount of additional collateral that would have been contractually required by derivative contracts and other trading agreements at September 30, 2017 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, 2017	
(Dollars in millions)	One incremental notch	Second incremental notch
Bank of America Corporation	$ 512	$ 668
Bank of America, N.A. and subsidiaries [1]	387	300

[1] Included in Bank of America Corporation collateral requirements in this table.

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, 2017 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, 2017	
(Dollars in millions)	One incremental notch	Second incremental notch
Derivative liabilities	$ 468	$ 1,122
Collateral posted	387	857

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, 2017 and 2016. For more information on the valuation adjustments on derivatives, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Valuation Adjustments on Derivatives [1]

Gains (Losses)	Three Months Ended September 30			
	2017		2016	
(Dollars in millions)	Gross	Net	Gross	Net
Derivative assets (CVA)	$ 23	$ 15	$ 280	$ 66
Derivative assets/liabilities (FVA)	37	43	42	51
Derivative liabilities (DVA)	29	17	(125)	(103)

	Nine Months Ended September 30			
	2017		2016	
	Gross	Net	Gross	Net
Derivative assets (CVA)	$ 281	$ 93	$ 45	$ 151
Derivative assets/liabilities (FVA)	113	140	9	20
Derivative liabilities (DVA)	(249)	(201)	106	(60)

(1) At September 30, 2017 and December 31, 2016, cumulative CVA reduced the derivative assets balance by $726 million and $1.0 billion, cumulative FVA reduced the net derivatives balance by $182 million and $296 million, and cumulative DVA reduced the derivative liabilities balance by $525 million and $774 million, respectively.

NOTE 3 Securities

The table below presents the amortized cost, gross unrealized gains and losses, and fair value of available-for-sale (AFS) debt securities, other debt securities carried at fair value, held-to-maturity (HTM) debt securities and AFS marketable equity securities at September 30, 2017 and December 31, 2016.

Debt Securities and Available-for-Sale Marketable Equity Securities

	September 30, 2017			
(Dollars in millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Available-for-sale debt securities				
Mortgage-backed securities:				
Agency	$196,530	$ 850	$ (1,186)	$196,194
Agency-collateralized mortgage obligations	7,021	73	(45)	7,049
Commercial	12,584	48	(168)	12,464
Non-agency residential [(1)]	2,345	333	(21)	2,657
Total mortgage-backed securities	218,480	1,304	(1,420)	218,364
U.S. Treasury and agency securities	50,824	70	(626)	50,268
Non-U.S. securities	5,432	9	(1)	5,440
Other taxable securities, substantially all asset-backed securities	6,964	77	(3)	7,038
Total taxable securities	281,700	1,460	(2,050)	281,110
Tax-exempt securities	19,117	167	(92)	19,192
Total available-for-sale debt securities	300,817	1,627	(2,142)	300,302
Other debt securities carried at fair value	16,265	345	(48)	16,562
Total debt securities carried at fair value	317,082	1,972	(2,190)	316,864
Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	122,345	267	(1,427)	121,185
Total debt securities [(2)]	$439,427	$ 2,239	$ (3,617)	$438,049
Available-for-sale marketable equity securities [(3)]	$22	$ 28	$ —	$50
	December 31, 2016			
Available-for-sale debt securities				
Mortgage-backed securities:				
Agency	$190,809	$ 640	$ (1,963)	$189,486
Agency-collateralized mortgage obligations	8,296	85	(51)	8,330
Commercial	12,594	21	(293)	12,322
Non-agency residential [(1)]	1,863	181	(31)	2,013
Total mortgage-backed securities	213,562	927	(2,338)	212,151
U.S. Treasury and agency securities	48,800	204	(752)	48,252
Non-U.S. securities	6,372	13	(3)	6,382
Other taxable securities, substantially all asset-backed securities	10,573	64	(23)	10,614
Total taxable securities	279,307	1,208	(3,116)	277,399
Tax-exempt securities	17,272	72	(184)	17,160
Total available-for-sale debt securities	296,579	1,280	(3,300)	294,559
Less: Available-for-sale securities of business held for sale [(4)]	(619)	—	—	(619)
Other debt securities carried at fair value	19,748	121	(149)	19,720
Total debt securities carried at fair value	315,708	1,401	(3,449)	313,660
Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	117,071	248	(2,034)	115,285
Total debt securities [(2)]	$432,779	$ 1,649	$ (5,483)	$428,945

Available-for-sale marketable equity securities [3]	$325	$ 51	$ (1)	$375

(1) At September 30, 2017 and December 31, 2016, the underlying collateral type included approximately 70 percent and 60 percent prime, 13 percent and 19 percent Alt-A, and 17 percent and 21 percent subprime.

(2) 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 $165.1 billion and $48.2 billion, and a fair value of $164.2 billion and $48.1 billion at September 30, 2017, and an amortized cost of $156.4 billion and $48.7 billion, and a fair value of $154.4 billion and $48.3 billion at December 31, 2016.

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

(4) Represents AFS debt securities of business held for sale. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

At September 30, 2017, the accumulated net unrealized loss on AFS debt securities included in accumulated OCI was $312 million, net of the related income tax benefit of $203 million. At both September 30, 2017 and December 31, 2016, the Corporation had nonperforming AFS debt securities of $121 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, 2017, the Corporation recorded unrealized mark-to-market net gains of $124 million and $323 million, and realized

net losses of $11 million and $129 million, compared to 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 for the same periods in 2016. These amounts exclude hedge results.

Other Debt Securities Carried at Fair Value

(Dollars in millions)	September 30 2017	December 31 2016
Mortgage-backed securities:		
Agency-collateralized mortgage obligations	$ 5	$ 5
Non-agency residential	3,058	3,139
Total mortgage-backed securities	3,063	3,144
Non-U.S. securities [1]	13,260	16,336
Other taxable securities, substantially all asset-backed securities	239	240
Total	$ 16,562	$ 19,720

[1] 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, 2017 and 2016 are presented in the table below.

Gains and Losses on Sales of AFS Debt Securities

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Gross gains	$130	$57	$286	$513
Gross losses	(5)	(6)	(8)	(23)
Net gains on sales of AFS debt securities	$125	$51	$278	$490
Income tax expense attributable to realized net gains on sales of AFS debt securities	$48	$19	$106	$186

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, 2017 and December 31, 2016.

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

	September 30, 2017					
	Less than Twelve Months		Twelve Months or Longer		Total	
(Dollars in millions)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Temporarily impaired AFS debt securities						
Mortgage-backed securities:						
Agency	$96,106	$ (681)	$17,570	$ (505)	$113,676	$ (1,186)
Agency-collateralized mortgage obligations	2,137	(15)	1,051	(30)	3,188	(45)
Commercial	5,068	(59)	2,819	(109)	7,887	(168)
Non-agency residential	140	(7)	118	(8)	258	(15)
Total mortgage-backed securities	103,451	(762)	21,558	(652)	125,009	(1,414)
U.S. Treasury and agency securities	20,685	(144)	17,035	(482)	37,720	(626)
Non-U.S. securities	774	(1)	—	—	774	(1)
Other taxable securities, substantially all asset-backed securities	—	—	384	(3)	384	(3)
Total taxable securities	124,910	(907)	38,977	(1,137)	163,887	(2,044)
Tax-exempt securities	—	—	2,682	(92)	2,682	(92)
Total temporarily impaired AFS debt securities	124,910	(907)	41,659	(1,229)	166,569	(2,136)
Other-than-temporarily impaired AFS debt securities (1)						
Non-agency residential mortgage-backed securities	27	(1)	30	(5)	57	(6)
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	$124,937	$ (908)	$41,689	$ (1,234)	$166,626	$ (2,142)

	December 31, 2016					
Temporarily impaired AFS debt securities						
Mortgage-backed securities:						
Agency	$135,210	$ (1,846)	$3,770	$ (117)	$138,980	$ (1,963)
Agency-collateralized mortgage obligations	3,229	(25)	1,028	(26)	4,257	(51)
Commercial	9,018	(293)	—	—	9,018	(293)
Non-agency residential	212	(1)	204	(13)	416	(14)
Total mortgage-backed securities	147,669	(2,165)	5,002	(156)	152,671	(2,321)
U.S. Treasury and agency securities	28,462	(752)	—	—	28,462	(752)
Non-U.S. securities	52	(1)	142	(2)	194	(3)
Other taxable securities, substantially all asset-backed securities	762	(5)	1,438	(18)	2,200	(23)
Total taxable securities	176,945	(2,923)	6,582	(176)	183,527	(3,099)
Tax-exempt securities	4,782	(148)	1,873	(36)	6,655	(184)
Total temporarily impaired AFS debt securities	181,727	(3,071)	8,455	(212)	190,182	(3,283)
Other-than-temporarily impaired AFS debt securities (1)						

Non-agency residential mortgage-backed securities	94	(1)	401	(16)	495	(17)
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	$181,821	$ (3,072)	$8,856	$ (228)	$190,677	$ (3,300)

(1) Includes other-than-temporary 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 had $0 and $33 million of credit-related OTTI losses on AFS debt securities that were recognized in other income for the three and nine months ended September 30, 2017 and $2 million and $14 million for the three and nine months ended September 30, 2016. The amount of noncredit-related OTTI losses, which are recognized in OCI, was insignificant for all periods presented.

The cumulative credit loss component of OTTI losses that have been recognized in income related to AFS debt securities that the Corporation does not intend to sell was $284 million and $248 million at September 30, 2017 and 2016.

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, 2017.

Significant Assumptions

	Weighted-average	Range [1] 10th Percentile [2]	90th Percentile [2]
Prepayment speed	12.0 %	3.0 %	20.6 %
Loss severity	19.8	9.1	36.5
Life default rate	21.0	1.2	77.7

(1) Represents the range of inputs/assumptions based upon the underlying collateral.
(2) The value of a variable below which the indicated percentile of observations will fall.

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 17.5 percent for prime, 18.4 percent for Alt-A and 29.5 percent for subprime at September 30, 2017. Additionally, default rates are projected by considering collateral characteristics including, but not limited to, LTV, FICO and geographic concentration. Weighted-average life default rates by collateral type were 15.6 percent for prime, 21.7 percent for Alt-A and 22.1 percent for subprime at September 30, 2017.

The remaining contractual maturity distribution and yields of the Corporation's debt securities carried at fair value and HTM debt securities at September 30, 2017 are summarized in the table below. Actual duration and yields may differ as prepayments on the loans underlying the mortgages or other asset-backed securities (ABS) are passed through to the Corporation.

Maturities of Debt Securities Carried at Fair Value and Held-to-maturity Debt Securities

	September 30, 2017									
	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	
(Dollars in millions)	Amount	Yield [1]	Amount	Yield [1]	Amount	Yield [1]	Amount	Yield [1]	Amount	Yield [1]
Amortized cost of debt securities carried at fair value										
Mortgage-backed securities:										
Agency	$6	4.67 %	$25	3.38 %	$593	2.56 %	$195,906	3.23 %	$196,530	3.23 %
Agency-collateralized mortgage obligations	—	—	—	—	34	2.50	6,991	3.18	7,025	3.18
Commercial	48	8.11	847	2.06	11,183	2.44	506	2.70	12,584	2.45
Non-agency residential	—	—	—	—	26	0.01	5,106	9.05	5,132	9.00
Total mortgage-backed securities	54	7.73	872	2.10	11,836	2.44	208,509	3.37	221,271	3.32
U.S. Treasury and agency securities	516	0.39	21,254	1.40	29,033	1.96	21	2.42	50,824	1.71
Non-U.S. securities	16,563	0.50	1,839	1.24	110	1.34	177	6.52	18,689	0.63
	1,747	2.28	2,865	2.59	1,418	2.95	1,151	3.28	7,181	2.70

Other taxable securities, substantially all asset-backed securities										
Total taxable securities	18,880	0.68	26,830	1.54	42,397	2.13	209,858	3.37	297,965	2.86
Tax-exempt securities	1,175	1.46	6,428	1.77	9,155	1.66	2,359	2.03	19,117	1.73
Total amortized cost of debt securities carried at fair value	$20,055	0.73	$33,258	1.58	$51,552	2.04	$212,217	3.36	$317,082	2.79
Amortized cost of HTM debt securities (2)	$—	—	$35	3.66	$1,074	2.56	$121,236	3.03	$122,345	3.03
Debt securities carried at fair value										
Mortgage-backed securities:										
Agency	$6		$25		$598		$195,565		$196,194	
Agency-collateralized mortgage obligations	—		—		33		7,021		7,054	
Commercial	48		848		11,072		496		12,464	
Non-agency residential	—		—		35		5,680		5,715	
Total mortgage-backed securities	54		873		11,738		208,762		221,427	
U.S. Treasury and agency securities	516		20,992		28,739		21		50,268	
Non-U.S. securities	16,563		1,844		111		182		18,700	
Other taxable securities, substantially all asset-backed securities	1,747		2,845		1,450		1,235		7,277	
Total taxable securities	18,880		26,554		42,038		210,200		297,672	
Tax-exempt securities	1,174		6,451		9,202		2,365		19,192	
Total debt securities carried at fair value	$20,054		$33,005		$51,240		$212,565		$316,864	
Fair value of HTM debt securities (2)	$—		$27		$896		$120,262		$121,185	

(1) The average yield is computed based on a constant effective interest rate over the contractual life of each security. 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.

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, 2017 and December 31, 2016.
During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business. This business, which at

December 31, 2016 included $9.2 billion of non-U.S. credit card loans and the related allowance for loan and lease losses of $243 million, was presented in assets of business held for sale on the Consolidated Balance Sheet. In this Note, all applicable amounts for December 31, 2016 include these balances, unless otherwise noted. For additional information, see Note 1 – Summary of Significant Accounting Principles.

	September 30, 2017							
(Dollars in millions)	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)	Loans Accounted for Under the Fair Value Option	Total Outstandings
Consumer real estate								
Core portfolio								
Residential mortgage	$ 1,583	$ 306	$ 986	$ 2,875	$ 167,782			$ 170,657
Home equity	246	111	435	792	44,585			45,377
Non-core portfolio								
Residential mortgage (5)	1,144	540	3,728	5,412	14,978	$ 8,399		28,789
Home equity	269	131	613	1,013	10,449	2,913		14,375
Credit card and other consumer								
U.S. credit card	492	355	810	1,657	90,945			92,602
Direct/Indirect consumer (6)	273	82	33	388	93,003			93,391
Other consumer (7)	7	1	1	9	2,415			2,424
Total consumer	4,014	1,526	6,606	12,146	424,157	11,312		447,615
Consumer loans accounted for under the fair value option (8)							$ 978	978
Total consumer loans and leases	4,014	1,526	6,606	12,146	424,157	11,312	978	448,593
Commercial								
U.S. commercial	459	176	349	984	281,693			282,677
Commercial real estate (9)	13	2	51	66	59,562			59,628
Commercial lease financing	39	56	45	140	21,273			21,413
Non-U.S. commercial	9	14	—	23	95,873			95,896
U.S. small business commercial	63	38	80	181	13,422			13,603
Total commercial	583	286	525	1,394	471,823			473,217
							5,307	5,307

Commercial loans accounted for under the fair value option [8]								
Total commercial loans and leases	583	286	525	1,394	471,823		5,307	478,524
Total loans and leases [10]	$4,597	$1,812	$7,131	$13,540	$895,980	$ 11,312	$ 6,285	$927,117
Percentage of outstandings	0.50 %	0.19 %	0.77 %	1.46 %	96.64 %	1.22 %	0.68 %	100.00 %

(1) Consumer real estate loans 30-59 days past due includes fully-insured loans of $905 million and nonperforming loans of $282 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of $443 million and nonperforming loans of $201 million.

(2) Consumer real estate includes fully-insured loans of $3.4 billion.

(3) Consumer real estate includes $2.3 billion and direct/indirect consumer includes $39 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 $1.5 billion. The Corporation no longer originates this product.

(6) Total outstandings includes auto and specialty lending loans of $50.0 billion, unsecured consumer lending loans of $484 million, U.S. securities-based lending loans of $39.3 billion, non-U.S. consumer loans of $2.9 billion and other consumer loans of $682 million.

(7) Total outstandings includes consumer leases of $2.3 billion and consumer overdrafts of $160 million.

(8) Consumer loans accounted for under the fair value option were residential mortgage loans of $615 million and home equity loans of $363 million. Commercial loans accounted for under the fair value option were U.S. commercial loans of $2.8 billion and non-U.S. commercial loans of $2.5 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 $55.5 billion and non-U.S. commercial real estate loans of $4.2 billion.

(10) The Corporation pledged $152.9 billion of loans to secure potential borrowing capacity with the Federal Reserve Bank and Federal Home Loan Bank (FHLB). 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.

(Dollars in millions)	December 31, 2016 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)	Loans Accounted for Under the Fair Value Option	Total Outstandings
Consumer real estate								
Core portfolio								
Residential mortgage	$1,340	$425	$1,213	$2,978	$153,519			$156,497
Home equity	239	105	451	795	48,578			49,373
Non-core portfolio								
Residential mortgage (5)	1,338	674	5,343	7,355	17,818	$10,127		35,300
Home equity	260	136	832	1,228	12,231	3,611		17,070
Credit card and other consumer								
U.S. credit card	472	341	782	1,595	90,683			92,278
Non-U.S. credit card	37	27	66	130	9,084			9,214
Direct/Indirect consumer (6)	272	79	34	385	93,704			94,089
Other consumer (7)	26	8	6	40	2,459			2,499
Total consumer	3,984	1,795	8,727	14,506	428,076	13,738		456,320
Consumer loans accounted for under the fair value option (8)							$1,051	1,051
Total consumer loans and leases	3,984	1,795	8,727	14,506	428,076	13,738	1,051	457,371
Commercial								
U.S. commercial	952	263	400	1,615	268,757			270,372
Commercial real estate (9)	20	10	56	86	57,269			57,355
Commercial lease financing	167	21	27	215	22,160			22,375
Non-U.S. commercial	348	4	5	357	89,040			89,397
U.S. small business commercial	96	49	84	229	12,764			12,993
Total commercial	1,583	347	572	2,502	449,990			452,492
Commercial loans accounted for under the fair value option (8)							6,034	6,034
Total commercial loans and leases	1,583	347	572	2,502	449,990		6,034	458,526
Total consumer and commercial loans and leases (10)	$5,567	$2,142	$9,299	$17,008	$878,066	$13,738	$7,085	$915,897
Less: Loans of business held for sale (10)								(9,214)

Total loans and leases (11)								$906,683
Percentage of outstandings (10)	0.61 %	0.23 %	1.02 %	1.86 %	95.87 %	1.50 %	0.77 %	100.00 %

(1) Consumer real estate loans 30-59 days past due includes fully-insured loans of $1.1 billion and nonperforming loans of $266 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of $547 million and nonperforming loans of $216 million.

(2) Consumer real estate includes fully-insured loans of $4.8 billion.

(3) Consumer real estate includes $2.5 billion and direct/indirect consumer includes $27 million of nonperforming loans.

(4) PCI loan amounts are shown gross of the valuation allowance.

(5) Total outstandings includes pay option loans of $1.8 billion. The Corporation no longer originates this product.

(6) Total outstandings includes auto and specialty lending loans of $48.9 billion, unsecured consumer lending loans of $585 million, U.S. securities-based lending loans of $40.1 billion, non-U.S. consumer loans of $3.0 billion, student loans of $497 million and other consumer loans of $1.1 billion.

(7) Total outstandings includes consumer finance loans of $465 million, consumer leases of $1.9 billion and consumer overdrafts of $157 million.

(8) Consumer loans accounted for under the fair value option were residential mortgage loans of $710 million and home equity loans of $341 million. Commercial loans accounted for under the fair value option were U.S. commercial loans of $2.9 billion and non-U.S. commercial loans of $3.1 billion. For more information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.

(9) Total outstandings includes U.S. commercial real estate loans of $54.3 billion and non-U.S. commercial real estate loans of $3.1 billion.

(10) Includes non-U.S. credit card loans, which were included in assets of business held for sale on the Consolidated Balance Sheet.

(11) The Corporation pledged $143.1 billion of loans to secure potential borrowing capacity with the Federal Reserve Bank and FHLB. 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 based on 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 (GSE) 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.

The Corporation has entered into long-term credit protection agreements with FNMA and FHLMC on loans totaling $6.5 billion

and $6.4 billion at September 30, 2017 and December 31, 2016, 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, 2017 and December 31, 2016, $336 million and $428 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, 2017, nonperforming loans discharged in Chapter 7 bankruptcy with no change in repayment terms were $379 million of which $224 million were current on their contractual payments, while $127 million were 90 days or more past due. Of the contractually current nonperforming loans, approximately 78 percent were discharged in Chapter 7 bankruptcy over 12 months ago, and approximately 68 percent were discharged 24 months or more ago.

During the three and nine months ended September 30, 2017, the Corporation sold nonperforming and other delinquent consumer real estate loans with a carrying value of $700 million and $1.2 billion, including $538 million and $742 million of PCI loans, compared to $360 million and $1.8 billion, including $111 million and $435 million of PCI loans, for the same periods in 2016. The Corporation recorded net recoveries of $88 million and $102 million related to these sales for the three and nine months ended September 30, 2017 compared to net recoveries of $6 million and net charge-offs of $39 million for the same periods in 2016. Gains related to these sales of $38 million and $50 million

were recorded in other income in the Consolidated Statement of Income for the three and nine months ended September 30, 2017 compared to gains of $19 million and $63 million for the same periods in 2016. During the nine months ended September 30, 2017, the Corporation transferred nonperforming loans with a net carrying value of $198 million to held-for-sale, which have been subsequently sold during the nine-month period. There were no transfers of nonperforming loans to held-for-sale for the same period in 2016.

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, 2017 and December 31, 2016. Nonperforming loans held-for-sale (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 2016 Annual Report on Form 10-K.

Credit Quality

(Dollars in millions)	Nonperforming Loans and Leases		Accruing Past Due 90 Days or More	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Consumer real estate				
Core portfolio				
Residential mortgage (1)	$1,076	$ 1,274	$396	$ 486
Home equity	1,046	969	—	—
Non-core portfolio				
Residential mortgage (1)	1,442	1,782	2,976	4,307
Home equity	1,645	1,949	—	—
Credit card and other consumer				
U.S. credit card	n/a	n/a	810	782
Non-U.S. credit card	n/a	n/a	—	66
Direct/Indirect consumer	43	28	31	34
Other consumer	—	2	1	4
Total consumer	5,252	6,004	4,214	5,679
Commercial				
U.S. commercial	863	1,256	82	106
Commercial real estate	130	72	—	7
Commercial lease financing	26	36	38	19
Non-U.S. commercial	244	279	—	5
U.S. small business commercial	55	60	68	71

Total commercial	1,318	1,703	188	208
Total loans and leases	$6,570	$ 7,707	$4,402	$ 5,887

(1) Residential mortgage loans in the core and non-core portfolios accruing past due 90 days or more are fully-insured loans. At September 30, 2017 and December 31, 2016, residential mortgage includes $2.3 billion and $3.0 billion 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 $1.1 billion and $1.8 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. Within the consumer portfolio segments, 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. 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. Within the Commercial portfolio segment, loans are evaluated using the internal classifications of pass rated or reservable criticized as the primary credit quality indicators. In addition to these primary credit quality indicators, the Corporation uses other credit quality indicators for certain types of loans. For more information on the portfolio segments and credit quality indicators, see Note 1 – Summary of Significant Accounting Principles and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

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, 2017 and December 31, 2016.

Consumer Real Estate – Credit Quality Indicators [1]

	September 30, 2017					
(Dollars in millions)	Core Residential Mortgage [2]	Non-core Residential Mortgage [2]	Residential Mortgage PCI [3]	Core Home Equity [2]	Non-core Home Equity [2]	Home Equity PCI
Refreshed LTV [4]						
Less than or equal to 90 percent	$146,679	$ 12,603	$ 7,095	$43,942	$8,128	$1,881
Greater than 90 percent but less than or equal to 100 percent	3,288	1,016	624	660	1,211	420
Greater than 100 percent	1,444	1,231	680	775	2,123	612
Fully-insured loans [5]	19,246	5,540	—	—	—	—
Total consumer real estate	$170,657	$ 20,390	$ 8,399	$45,377	$11,462	$2,913
Refreshed FICO score						
Less than 620	$2,285	$ 2,560	$ 2,102	$1,192	$2,268	$470
Greater than or equal to 620 and less than 680	4,652	2,260	1,740	2,416	2,506	495
Greater than or equal to 680 and less than 740	22,153	3,720	2,446	8,484	2,860	862
Greater than or equal to 740	122,321	6,310	2,111	33,285	3,828	1,086
Fully-insured loans [5]	19,246	5,540	—	—	—	—
Total consumer real estate	$170,657	$ 20,390	$ 8,399	$45,377	$11,462	$2,913

(1) Excludes $978 million of loans accounted for under the fair value option.

(2) Excludes PCI loans.

(3) Includes $1.3 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

	September 30, 2017		
(Dollars in millions)	U.S. Credit Card	Direct/Indirect Consumer	Other Consumer
Refreshed FICO score			
Less than 620	$4,612	$ 1,578	$ 42
Greater than or equal to 620 and less than 680	12,195	2,003	125
Greater than or equal to 680 and less than 740	34,796	12,161	364
Greater than or equal to 740	40,999	34,731	1,730
Other internal credit metrics [1, 2]	—	42,918	163
Total credit card and other consumer	$92,602	$ 93,391	$ 2,424

(1) Other internal credit metrics may include delinquency status, geography or other factors.

(2) Direct/indirect consumer includes $42.2 billion of securities-based lending which is overcollateralized and therefore has minimal credit risk.

Commercial – Credit Quality Indicators [1]

	September 30, 2017		
(Dollars in millions)	U.S.	Commercial	Non-U.S.

	Commercial	Real Estate	Commercial Lease Financing	Commercial	U.S. Small Business Commercial (2)
Risk ratings					
Pass rated	$273,670	$ 59,001	$ 20,763	$ 93,498	$ 354
Reservable criticized	9,007	627	650	2,398	50
Refreshed FICO score (3)					
Less than 620					224
Greater than or equal to 620 and less than 680					615
Greater than or equal to 680 and less than 740					1,842
Greater than or equal to 740					3,683
Other internal credit metrics (3, 4)					6,835
Total commercial	$282,677	$ 59,628	$ 21,413	$ 95,896	$ 13,603

(1) Excludes $5.3 billion of loans accounted for under the fair value option.

(2) U.S. small business commercial includes $825 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, 2017, 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.

Consumer Real Estate – Credit Quality Indicators [1]

(Dollars in millions)	December 31, 2016 Core Residential Mortgage [2]	Non-core Residential Mortgage [2]	Residential Mortgage PCI [3]	Core Home Equity [2]	Non-core Home Equity [2]	Home Equity PCI
Refreshed LTV [4]						
Less than or equal to 90 percent	$129,737	$ 14,280	$ 7,811	$47,171	$8,480	$1,942
Greater than 90 percent but less than or equal to 100 percent	3,634	1,446	1,021	1,006	1,668	630
Greater than 100 percent	1,872	1,972	1,295	1,196	3,311	1,039
Fully-insured loans [5]	21,254	7,475	—	—	—	—
Total consumer real estate	$156,497	$ 25,173	$ 10,127	$49,373	$13,459	$3,611
Refreshed FICO score						
Less than 620	$2,479	$ 3,198	$ 2,741	$1,254	$2,692	$559
Greater than or equal to 620 and less than 680	5,094	2,807	2,241	2,853	3,094	636
Greater than or equal to 680 and less than 740	22,629	4,512	2,916	10,069	3,176	1,069
Greater than or equal to 740	105,041	7,181	2,229	35,197	4,497	1,347
Fully-insured loans [5]	21,254	7,475	—	—	—	—
Total consumer real estate	$156,497	$ 25,173	$ 10,127	$49,373	$13,459	$3,611

(1) Excludes $1.1 billion of loans accounted for under the fair value option.

(2) Excludes PCI loans.

(3) Includes $1.6 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, 2016 U.S. Credit Card	Non-U.S. Credit Card	Direct/Indirect Consumer	Other Consumer [1]
Refreshed FICO score				
Less than 620	$4,431	$ —	$ 1,478	$ 187
Greater than or equal to 620 and less than 680	12,364	—	2,070	222
Greater than or equal to 680 and less than 740	34,828	—	12,491	404
Greater than or equal to 740	40,655	—	33,420	1,525
Other internal credit metrics [2, 3, 4]	—	9,214	44,630	161
Total credit card and other consumer	$92,278	$ 9,214	$ 94,089	$ 2,499

(1) At December 31, 2016, 19 percent of the other consumer portfolio was 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 $43.1 billion of securities-based lending which is overcollateralized and therefore has minimal credit risk and $499 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 was evaluated using internal credit metrics, including delinquency status. At December 31, 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)	December 31, 2016 U.S. Commercial	Commercial Real Estate	Commercial Lease Financing	Non-U.S. Commercial	U.S. Small Business Commercial [2]
Risk ratings					
Pass rated	$261,214	$ 56,957	$ 21,565	$ 85,689	$ 453
Reservable criticized	9,158	398	810	3,708	71
Refreshed FICO score [3]					
Less than 620					200
Greater than or equal to 620 and less than 680					591
Greater than or equal to 680 and less than 740					1,741
Greater than or equal to 740					3,264
Other internal credit metrics [3, 4]					6,673
Total commercial	$270,372	$ 57,355	$ 22,375	$ 89,397	$ 12,993

(1) Excludes $6.0 billion of loans accounted for under the fair value option.

(2) U.S. small business commercial includes $755 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, 2016, 98 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.

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 97. For more information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 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. For more information on impaired consumer real estate loans, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. 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 $1.2 billion were included in TDRs at September 30, 2017, of which $379 million were classified as nonperforming and $442 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.

At both September 30, 2017 and December 31, 2016, 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 $259 million and $363 million at September 30, 2017 and December 31, 2016. The carrying value of consumer real estate loans, including fully-insured and PCI loans, for which formal foreclosure proceedings were in process at September 30, 2017 was $3.7 billion. During the three and nine months ended September 30, 2017, the Corporation reclassified $198 million and $624 million 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 $326 million and $1.1 billion for the same periods in 2016. The reclassifications represent non-cash investing activities and, accordingly, are not reflected in the Consolidated Statement of Cash Flows.

The table below provides the unpaid principal balance, carrying value and related allowance at September 30, 2017 and December 31, 2016, and the average carrying value and interest income recognized for the three and nine months ended September 30, 2017 and 2016 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

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Unpaid Principal Balance	Carrying Value	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance
With no recorded allowance						
Residential mortgage	$9,212	$ 7,172	$—	$11,151	$8,695	$ —
Home equity	3,644	1,962	—	3,704	1,953	—
With an allowance recorded						
Residential mortgage	$3,167	$ 3,079	$188	$4,041	$3,936	$ 219
Home equity	990	909	181	910	824	137
Total						
Residential mortgage	$12,379	$ 10,251	$188	$15,192	$12,631	$ 219
Home equity	4,634	2,871	181	4,614	2,777	137

	Three Months Ended September 30				Nine Months Ended September 30			
	2017		2016		2017		2016	
	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)
With no recorded allowance								
Residential mortgage	$7,498	$ 77	$9,673	$ 83	$7,964	$237	$10,523	$ 277
Home equity	2,000	27	1,964	37	2,001	82	1,883	67
With an allowance recorded								
Residential mortgage	$3,254	$ 29	$4,676	$ 36	$3,565	$97	$5,371	$ 133
Home equity	873	6	822	7	850	18	863	18
Total								
Residential mortgage	$10,752	$ 106	$14,349	$ 119	$11,529	$334	$15,894	$ 410
Home equity	2,873	33	2,786	44	2,851	100	2,746	85

(1) Interest income recognized includes interest accrued and collected on the outstanding balances of accruing impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

The table below presents the September 30, 2017 and 2016 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, 2017 and 2016, 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, 2017 and 2016 [1]

	September 30, 2017						Three Months Ended September 30, 2017
(Dollars in millions)	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate		Post-Modification Interest Rate [2]		Net Charge-offs [3]
Residential mortgage	$294	$ 263	4.42	%	4.33	%	$ 2
Home equity	212	172	4.01		3.96		15
Total	$506	$ 435	4.25		4.17		$ 17
	September 30, 2016						Three Months Ended September 30, 2016
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

Consumer Real Estate – TDRs Entered into During the Nine Months Ended September 30, 2017 and 2016 [1]

	September 30, 2017						Nine Months Ended September 30, 2017
Residential mortgage	$738	$ 657	4.49	%	4.25	%	$ 5
Home equity	630	491	4.16		3.52		32
Total	$1,368	$ 1,148	4.33		3.90		$ 37
	September 30, 2016						Nine Months Ended September 30, 2016
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

(1) During the three and nine months ended September 30, 2017, there was no forgiveness of principal related to residential mortgage loans in connection with TDRs compared to $1 million and $12 million for the same periods in 2016.

(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, 2017 and 2016 due to sales and other dispositions.

The table below presents the September 30, 2017 and 2016 carrying value for consumer real estate loans that were modified in a TDR during the three and nine months ended September 30, 2017 and 2016 by type of modification.

Consumer Real Estate – Modification Programs

	TDRs Entered into During the Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Modifications under government programs				
Contractual interest rate reduction	$10	$18	$56	$121
Principal and/or interest forbearance	1	2	4	11
Other modifications [1]	7	3	22	21
Total modifications under government programs	18	23	82	153
Modifications under proprietary programs				
Contractual interest rate reduction	15	20	178	143
Capitalization of past due amounts	12	4	47	27
Principal and/or interest forbearance	2	2	28	47
Other modifications [1]	1	45	45	72
Total modifications under proprietary programs	30	71	298	289
Trial modifications	329	490	605	853
Loans discharged in Chapter 7 bankruptcy [2]	58	84	163	199
Total modifications	$435	$668	$1,148	$1,494

(1) Includes other modifications such as term or payment extensions and repayment plans.

(2) Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

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, 2017 and 2016 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.

Consumer Real Estate – TDRs Entering Payment Default that were
Modified During the Preceding 12 Months

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Modifications under government programs	$16	$51	$62	$230
Modifications under proprietary programs	32	40	99	145
Loans discharged in Chapter 7 bankruptcy (1)	16	42	93	124
Trial modifications (2)	54	161	312	648
Total modifications	$118	$294	$566	$1,147

(1) Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.
(2) Includes trial modification offers 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 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 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 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.
The table below provides the unpaid principal balance, carrying value and related allowance at September 30, 2017 and December 31, 2016, and the average carrying value and interest income recognized for the three and nine months ended September 30, 2017 and 2016 on TDRs within the Credit Card and Other Consumer portfolio segment.

Impaired Loans – Credit Card and Other Consumer

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Unpaid Principal Balance	Carrying Value (1)	Related Allowance	Unpaid Principal Balance	Carrying Value (1)	Related Allowance
With no recorded allowance						
Direct/Indirect consumer	$53	$ 25	$—	$49	$22	$ —
With an allowance recorded						
U.S. credit card	$452	$ 458	$125	$479	$485	$ 128

Non-U.S. credit card	n/a	n/a	n/a	88	100	61
Direct/Indirect consumer	1	2	—	3	3	—
Total						
U.S. credit card	$452	$ 458	$125	$479	$485	$ 128
Non-U.S. credit card	n/a	n/a	n/a	88	100	61
Direct/Indirect consumer	54	27	—	52	25	—

	Three Months Ended September 30				Nine Months Ended September 30			
	2017		2016		2017		2016	
	Average Carrying Value	Interest Income Recognized (2)	Average Carrying Value	Interest Income Recognized (2)	Average Carrying Value	Interest Income Recognized (2)	Average Carrying Value	Interest Income Recognized (2)
With no recorded allowance								
Direct/Indirect consumer	$20	$ —	$21	$ —	$19	$—	$21	$ —
With an allowance recorded								
U.S. credit card	$457	$ 6	$539	$ 7	$466	$18	$571	$ 24
Non-U.S. credit card	—	—	107	—	62	1	115	2
Direct/Indirect consumer	2	—	7	—	2	—	12	—
Total								
U.S. credit card	$457	$ 6	$539	$ 7	$466	$18	$571	$ 24
Non-U.S. credit card	—	—	107	—	62	1	115	2
Direct/Indirect consumer	22	—	28	—	21	—	33	—

(1) Includes accrued interest and fees.

(2) Interest income recognized includes interest accrued and collected on the outstanding balances of accruing impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

n/a = not applicable

The table below provides information on the Corporation's primary modification programs for the Credit Card and Other Consumer TDR portfolio at September 30, 2017 and December 31, 2016.

Credit Card and Other Consumer – TDRs by Program Type

(Dollars in millions)	Internal Programs		External Programs		Other (1)		Total		Percent of Balances Current or Less Than 30 Days Past Due	
	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016
U.S. credit card	$ 201	$ 220	$ 256	$ 264	$ 1	$ 1	$ 458	$ 485	88.30 %	88.99 %
Non-U.S. credit card	n/a	11	n/a	7	n/a	82	n/a	100	n/a	38.47
Direct/Indirect consumer	1	2	1	1	25	22	27	25	89.05	90.49
Total TDRs by program type	$ 202	$ 233	$ 257	$ 272	$ 26	$ 105	$ 485	$ 610	88.34	80.79

(1) Other TDRs for non-U.S. credit card included modifications of accounts that are ineligible for a fixed payment plan.

n/a = not applicable

The table below provides information on the Corporation's Credit Card and Other Consumer TDR portfolio including the September 30, 2017 and 2016 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, 2017 and 2016, and net charge-offs recorded during the period in which the modification occurred.

Credit Card and Other Consumer – TDRs Entered into During the Three and Nine Months Ended September 30, 2017 and 2016

(Dollars in millions)	Three Months Ended September 30				Nine Months Ended September 30			
	Unpaid Principal Balance	Carrying Value (1)	Pre-Mod Interest Rate	Post-Mod Interest Rate	Unpaid Principal Balance	Carrying Value (1)	Pre-Mod Interest Rate	Post-Mod Interest Rate
	2017							
U.S. credit card	$ 60	$ 64	17.96 %	5.40 %	$ 152	$ 161	17.88 %	5.49 %
Direct/Indirect consumer	22	14	4.92	4.53	29	18	4.99	4.37
Total (2)	$ 82	$ 78	15.64	5.25	$ 181	$ 179	16.57	5.37
	2016							
U.S. credit card	$ 46	$ 50	17.48 %	5.33 %	$ 126	$ 134	17.42 %	5.45 %
Non-U.S. credit card	32	36	24.11	0.38	63	73	23.93	0.44
Direct/Indirect consumer	7	4	4.13	4.08	16	9	4.50	4.33
Total (2)	$ 85	$ 90	19.55	3.27	$ 205	$ 216	19.05	3.72

(1) Includes accrued interest and fees.

(2) Net charge-offs were $14 million and $33 million for the three and nine months ended September 30, 2017 compared to $26 million and $43 million for the same periods in 2016.

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 13 percent of both new U.S. credit card TDRs and 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, 2017 that had been modified in a TDR during the preceding 12 months were $7 million and $19 million for U.S. credit card and $1 million and $3 million for direct/indirect consumer. During the three and nine months ended September 30, 2016, loans that entered into payment default 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.

Commercial Loans

Impaired commercial loans include nonperforming loans and TDRs (both performing and nonperforming). For more information on impaired commercial loans, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

At September 30, 2017 and December 31, 2016, remaining commitments to lend additional funds to debtors whose terms have been modified in a commercial loan TDR were $279 million and $461 million.

Commercial foreclosed properties totaled $40 million and $14 million at September 30, 2017 and December 31, 2016.

The table below provides information on impaired loans in the Commercial loan portfolio segment including the unpaid principal balance, carrying value and related allowance at September 30, 2017 and December 31, 2016, and the average carrying value and interest income recognized for the three and nine months ended September 30, 2017 and 2016. Certain impaired commercial loans do not have a related allowance as the valuation of these impaired loans exceeded the carrying value, which is net of previously recorded charge-offs.

Impaired Loans – Commercial

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Unpaid Principal Balance	Carrying Value	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance
With no recorded allowance						
U.S. commercial	$683	$ 675	$—	$860	$827	$ —
Commercial real estate	117	106	—	77	71	—
Non-U.S. commercial	44	27	—	130	130	—
With an allowance recorded						
U.S. commercial	$1,466	$ 1,132	$123	$2,018	$1,569	$ 132
Commercial real estate	151	39	13	243	96	10
Commercial lease financing	13	12	2	6	4	—
Non-U.S. commercial	497	437	67	545	432	104
U.S. small business commercial [1]	82	70	27	85	73	27
Total						
U.S. commercial	$2,149	$ 1,807	$123	$2,878	$2,396	$ 132
Commercial real estate	268	145	13	320	167	10
Commercial lease financing	13	12	2	6	4	—
Non-U.S. commercial	541	464	67	675	562	104
U.S. small business commercial [1]	82	70	27	85	73	27

	Three Months Ended September 30				Nine Months Ended September 30			
	2017		2016		2017		2016	
	Average Carrying Value	Interest Income Recognized [2]	Average Carrying Value	Interest Income Recognized [2]	Average Carrying Value	Interest Income Recognized [2]	Average Carrying Value	Interest Income Recognized [2]
With no recorded allowance								
U.S. commercial	$726	$ 3	$940	$ 5	$822	$9	$726	$ 10
Commercial real estate	77	1	59	—	61	1	67	—
Non-U.S. commercial	14	—	32	—	55	—	18	—
With an allowance recorded								
U.S. commercial	$1,166	$ 9	$1,624	$ 16	$1,305	$25	$1,570	$ 46
Commercial real estate	72	—	87	1	85	2	95	3
Commercial lease financing	10	—	4	—	6	—	2	—
Non-U.S. commercial	463	3	397	5	466	9	372	11
U.S. small business commercial [1]	72	—	81	1	74	—	91	1
Total								
U.S. commercial	$1,892	$ 12	$2,564	$ 21	$2,127	$34	$2,296	$ 56
Commercial real estate	149	1	146	1	146	3	162	3
Commercial lease financing	10	—	4	—	6	—	2	—
Non-U.S. commercial	477	3	429	5	521	9	390	11
U.S. small business commercial [1]	72	—	81	1	74	—	91	1

(1) Includes U.S. small business commercial renegotiated TDR loans and related allowance.

(2) Interest income recognized includes interest accrued and collected on the outstanding balances of accruing impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

The table below presents the September 30, 2017 and 2016 unpaid principal balance and carrying value of commercial loans that were modified as TDRs during the three and nine months ended September 30, 2017 and 2016, 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 and Nine Months Ended September 30, 2017 and 2016

(Dollars in millions)	Three Months Ended September 30 Unpaid Principal Balance	Three Months Ended September 30 Carrying Value	Nine Months Ended September 30 Unpaid Principal Balance	Nine Months Ended September 30 Carrying Value
	2017			
U.S. commercial	$357	$ 322	$763	$ 700
Commercial real estate	—	—	16	9
Commercial lease financing	12	12	12	12
Non-U.S. commercial	105	105	105	105
U.S. small business commercial (1)	3	3	11	12
Total (2)	$477	$ 442	$907	$ 838
	2016			
U.S. commercial	$793	$ 768	$1,483	$ 1,447
Commercial real estate	4	4	11	11
Commercial lease financing	2	2	7	4
Non-U.S. commercial	17	17	265	201
U.S. small business commercial (1)	1	1	4	4
Total (2)	$817	$ 792	$1,770	$ 1,667

(1) U.S. small business commercial TDRs are comprised of renegotiated small business card loans.

(2) Net charge-offs were $27 million and $89 million for the three and nine months ended September 30, 2017 compared to $14 million and $94 million for the same periods in 2016.

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 $57 million and $123 million for U.S. commercial, $32 million and $17 million for commercial real estate and $0 and $2 million for U.S. small business commercial at September 30, 2017 and 2016.

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, 2017 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, 2017	Nine Months Ended September 30, 2017
Accretable yield, beginning of period	$ 3,288	$ 3,805
Accretion	(147)	(465)
Disposals/transfers	(282)	(521)
Reclassifications from nonaccretable difference	80	120
Accretable yield, September 30, 2017	$ 2,939	$ 2,939

During the three and nine months ended September 30, 2017, the Corporation sold PCI loans with a carrying value of $538 million and $742 million, which excludes the related allowance of $45 million and $80 million. 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. For more information on PCI loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 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 $13.2 billion and $9.1 billion at September 30, 2017 and December 31, 2016. Cash and non-cash proceeds from sales and paydowns of loans originally classified as LHFS were $28.0 billion and $22.1 billion for the nine months ended September 30, 2017 and 2016. Cash used for originations and purchases of LHFS totaled $31.4 billion and $24.2 billion for the nine months ended September 30, 2017 and 2016.

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, 2017 and 2016.

(Dollars in millions)	Consumer Real Estate (1)	Credit Card and Other Consumer	Commercial	Total Allowance
	Three Months Ended September 30, 2017			
Allowance for loan and lease losses, July 1	$2,309	$ 3,386	$ 5,180	$ 10,875
Loans and leases charged off	(231)	(919)	(212)	(1,362)
Recoveries of loans and leases previously charged off	230	189	43	462
Net charge-offs	(1)	(730)	(169)	(900)
Write-offs of PCI loans (2)	(73)	—	—	(73)
Provision for loan and lease losses (3)	(204)	934	99	829
Other (4)	1	(40)	1	(38)
Allowance for loan and lease losses, September 30	2,032	3,550	5,111	10,693
Reserve for unfunded lending commitments, July 1	—	—	757	757
Provision for unfunded lending commitments	—	—	5	5
Reserve for unfunded lending commitments, September 30	—	—	762	762
Allowance for credit losses, September 30	$2,032	$ 3,550	$ 5,873	$ 11,455
	Three Months Ended September 30, 2016			
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 (2)	(83)	—	—	(83)
Provision for loan and lease losses (3)	(36)	741	129	834
Other (4)	—	(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 (4)	—	—	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
	Nine Months Ended September 30, 2017			
Allowance for loan and lease losses, January 1	$2,750	$3,229	$5,258	$11,237
Loans and leases charged off	(633)	(2,819)	(570)	(4,022)
Recoveries of loans and leases previously charged off	520	623	137	1,280
Net charge-offs (5)	(113)	(2,196)	(433)	(2,742)
Write-offs of PCI loans (2)	(161)	—	—	(161)
Provision for loan and lease losses (3)	(445)	2,553	287	2,395
Other (4)	1	(36)	(1)	(36)
Allowance for loan and lease losses, September 30	2,032	3,550	5,111	10,693
Reserve for unfunded lending commitments, January 1	—	—	762	762
Provision for unfunded lending commitments	—	—	—	—
Reserve for unfunded lending commitments, September 30	—	—	762	762
Allowance for credit losses, September 30	$2,032	$3,550	$5,873	$11,455

	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 (2)	(270)	—	—	(270)
Provision for loan and lease losses (3)	(191)	2,031	962	2,802
Other (4)	—	(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
Other (4)	—	—	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

(1) Includes valuation allowance associated with the PCI loan portfolio.

(2) Write-offs included $45 million and $80 million associated with the sale of PCI loans during the three and nine months ended September 30, 2017 compared to $11 million and $50 million for the same periods in 2016.

(3) During the three and nine months ended September 30, 2017, for the PCI loan portfolio, the Corporation recorded provision expense of $12 million and $56 million compared to provision expense of $8 million and a benefit of $81 million for the same periods in 2016.

(4) Primarily represents the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments, transfers to held-for-sale and certain other reclassifications.

(5) Includes net charge-offs of non-U.S. credit card loans, which were previously included in assets of business held for sale. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

The table below presents the allowance and the carrying value of outstanding loans and leases by portfolio segment at September 30, 2017 and December 31, 2016.

Allowance and Carrying Value by Portfolio Segment

(Dollars in millions)	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total
	September 30, 2017			
Impaired loans and troubled debt restructurings [1]				
Allowance for loan and lease losses [2]	$369	$125	$232	$726
Carrying value [3]	13,122	485	2,498	16,105
Allowance as a percentage of carrying value	2.81 %	25.77 %	9.29 %	4.51 %
Loans collectively evaluated for impairment				
Allowance for loan and lease losses	$1,348	$3,425	$4,879	$9,652
Carrying value [3, 4]	234,764	187,932	470,719	893,415
Allowance as a percentage of carrying value [4]	0.57 %	1.82 %	1.04 %	1.08 %
Purchased credit-impaired loans				
Valuation allowance	$315	n/a	n/a	$315
Carrying value gross of valuation allowance	11,312	n/a	n/a	11,312
Valuation allowance as a percentage of carrying value	2.78 %	n/a	n/a	2.78 %
Total				
Total allowance for loan and lease losses	$2,032	$3,550	$5,111	$10,693
Carrying value [3, 4]	259,198	188,417	473,217	920,832
Total allowance as a percentage of carrying value [4]	0.78 %	1.88 %	1.08 %	1.16 %
	December 31, 2016			
Impaired loans and troubled debt restructurings [1]				
Allowance for loan and lease losses [2]	$356	$189	$273	$818
Carrying value [3]	15,408	610	3,202	19,220
Allowance as a percentage of carrying value	2.31 %	30.98 %	8.53 %	4.26 %
Loans collectively evaluated for impairment				
Allowance for loan and lease losses	$1,975	$3,283	$4,985	$10,243
Carrying value [3, 4]	229,094	197,470	449,290	875,854
Allowance as a percentage of carrying value [4]	0.86 %	1.66 %	1.11 %	1.17 %
Purchased credit-impaired loans				
Valuation allowance	$419	n/a	n/a	$419
Carrying value gross of valuation allowance	13,738	n/a	n/a	13,738
Valuation allowance as a percentage of carrying value	3.05 %	n/a	n/a	3.05 %
Less: Assets of business held for sale [5]				
Allowance for loan and lease losses [6]	n/a	$(243)	n/a	$(243)
Carrying value [3]	n/a	(9,214)	n/a	(9,214)
Total				
Allowance for loan and lease losses	$2,750	$3,229	$5,258	$11,237
Carrying value [3, 4]	258,240	188,866	452,492	899,598
Allowance as a percentage of carrying value [4]	1.06 %	1.71 %	1.16 %	1.25 %

(1) Impaired loans include nonperforming commercial loans and all TDRs, including both commercial and consumer 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 $27 million related to impaired U.S. small business commercial at both September 30, 2017 and December 31, 2016.

(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 $6.3 billion and $7.1 billion at September 30, 2017 and December 31, 2016.

(5) Represents allowance for loan and lease losses and loans related to the non-U.S. credit card loan portfolio, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

(6) Includes $61 million of allowance for loan and lease losses related to impaired loans and TDRs and $182 million related to loans collectively evaluated for impairment at December 31, 2016.

n/a = not applicable

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. For more information on the Corporation's use 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 2016 Annual Report on Form 10-K.

The tables in this Note present the assets and liabilities of consolidated and unconsolidated VIEs at September 30, 2017 and December 31, 2016, 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, 2017 and December 31, 2016 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.

The Corporation invests in 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, for example 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 2016 Annual Report on Form 10-K. The Corporation uses VIEs, such as common trust funds managed within Global Wealth & Investment Management (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 herein.

Except as described below, the Corporation did not provide financial support to consolidated or unconsolidated VIEs during the nine months ended September 30, 2017 or the year ended December 31, 2016 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. 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.

The table below summarizes select information related to first-lien mortgage securitizations for the three and nine months ended September 30, 2017 and 2016.

First-lien Mortgage Securitizations

	Residential Mortgage - Agency				Commercial Mortgage			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
Cash proceeds from new securitizations (1)	$3,833	$7,131	$11,791	$18,580	$1,225	$1,052	$2,931	$3,031
Gains on securitizations (2)	40	89	140	322	14	27	67	18
Repurchases from securitization trusts (3)	609	684	2,083	2,058	—	—	—	—

(1) The Corporation transfers residential mortgage loans to securitizations sponsored by the GSEs or Government National Mortgage Association (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.

(2)

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 $63 million and $195 million, net of hedges, during the three and nine months ended September 30, 2017 compared to $149 million and $349 million for the same periods in 2016, are not included in the table above.

(3) 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. The Corporation may also repurchase loans from securitization trusts to perform modifications. Repurchased loans include FHA-insured mortgages collateralizing GNMA securities.

In addition to cash proceeds as reported in the table above, the Corporation received securities with an initial fair value of $770 million and $1.3 billion in connection with first-lien mortgage securitizations for the three and nine months ended September 30, 2017 compared to $1.2 billion and $3.1 billion for the same periods in 2016. The receipt of these securities represents non-cash operating and investing activities and, accordingly, is not reflected in the Consolidated Statement of Cash Flows. Substantially 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, 2017 and 2016, there were no changes to the initial classification.

The Corporation recognizes consumer MSRs from the sale or securitization of consumer real estate loans. The unpaid principal balance of loans serviced for investors, including residential mortgage and home equity loans, totaled $289.3 billion and $355.0 billion at September 30, 2017 and 2016. Servicing fee and ancillary fee income on serviced loans was $213 million and

$691 million during the three and nine months ended September 30, 2017 compared to $286 million and $887 million for the same periods in 2016. Servicing advances on serviced loans, including loans serviced for others and loans held for investment were $4.7 billion and $6.2 billion at September 30, 2017 and December 31, 2016. For more information on MSRs, see Note 14 – Fair Value Measurements.

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 related to these deconsolidations were recorded in other income in the Consolidated Statement of Income. No deconsolidations of agency residential mortgage securitization vehicles occurred during the three and nine months ended September 30, 2017.

The following table summarizes select information related to first-lien mortgage securitization trusts in which the Corporation held a variable interest at September 30, 2017 and December 31, 2016.

First-lien Mortgage VIEs

	Residential Mortgage									
			Non-agency							
	Agency		Prime		Subprime		Alt-A		Commercial Mortgage	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Unconsolidated VIEs										
Maximum loss exposure (1)	$19,585	$22,661	$623	$757	$2,677	$2,750	$464	$560	$420	$344
On-balance sheet assets										
Senior securities held (2):										
Trading account assets	$300	$1,399	$18	$20	$51	$112	$35	$118	$58	$51
Debt securities carried at FV	15,827	17,620	359	441	2,226	2,235	318	305	—	—
Held-to-maturity securities	3,447	3,630	—	—	—	—	—	—	160	64
Subordinate securities held (2):										
Trading account assets	—	—	1	1	22	23	1	1	11	14
Debt securities carried at FV	—	—	6	8	2	2	20	23	48	54
Held-to-maturity securities	—	—	—	—	—	—	—	—	—	13
Residual interests held	—	—	—	—	—	—	—	—	25	25
All other assets (3)	11	12	23	28	—	—	90	113	—	—
Total retained positions	$19,585	$22,661	$407	$498	$2,301	$2,372	$464	$560	$302	$221
Principal balance outstanding (4)	$242,353	$265,332	$11,152	$16,280	$10,993	$19,373	$29,550	$35,788	$24,945	$23,826
Consolidated VIEs										
Maximum loss exposure (1)	$15,040	$18,084	$337	$—	$—	$—	$—	$25	$—	$—
On-balance sheet assets										
Trading account assets	$37	$434	$330	$—	$—	$—	$—	$99	$—	$—
Loans and leases	14,762	17,223	—	—	—	—	—	—	—	—
All other assets	241	427	7	—	—	—	—	—	—	—
Total assets	$15,040	$18,084	$337	$—	$—	$—	$—	$99	$—	$—

On-balance sheet liabilities										
Long-term debt	$—	$—	$—	$—	$—	$—	$—	$ 74	$—	$—
All other liabilities	2	4	—	—	—	—	—	—	—	—
Total liabilities	$ 2	$ 4	$—	$—	$—	$—	$—	$ 74	$—	$—

(1) Maximum loss exposure includes obligations under loss-sharing reinsurance and other arrangements for non-agency residential mortgage and commercial mortgage securitizations, but excludes the reserve for 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 14 – Fair Value Measurements.

(2) As a holder of these securities, the Corporation receives scheduled principal and interest payments. During the three and nine months ended September 30, 2017, the Corporation recognized $0 and $16 million compared to $1 million and $5 million for the same periods in 2016 of credit-related impairment losses in earnings on those securities classified as AFS debt securities. During the three and nine months ended September 30, 2017 and 2016, the Corporation recognized no credit-related impairment losses in earnings on those securities classified as HTM.

(3) Not included in the table above are all other assets of $147 million and $189 million, representing the unpaid principal balance of mortgage loans eligible for repurchase from unconsolidated residential mortgage securitization vehicles, principally guaranteed by GNMA, and all other liabilities of $147 million and $189 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, 2017 and December 31, 2016.

(4) Principal balance outstanding includes loans where the Corporation was the transferor to securitization vehicles with which it has continuing involvement, which may include servicing the loans.

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, 2017 and December 31, 2016.

Home Equity Loan, Credit Card and Other Asset-backed VIEs

	Home Equity Loan [1]		Credit Card [2, 3]		Resecuritization Trusts		Municipal Bond Trusts	
(Dollars in millions)	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016	September 30 2017	December 31 2016
Unconsolidated VIEs								
Maximum loss exposure	$1,632	$ 2,732	$—	$ —	$9,107	$ 9,906	$1,566	$ 1,635
On-balance sheet assets								
Senior securities held [4]:								
Trading account assets	$—	$ —	$—	$ —	$1,246	$ 902	$9	$ —
Debt securities carried at fair value	39	46	—	—	1,891	2,338	—	—
Held-to-maturity securities	—	—	—	—	5,866	6,569	—	—
Subordinate securities held [4]:								
Trading account assets	—	—	—	—	30	27	—	—
Debt securities carried at fair value	—	—	—	—	74	70	—	—
Total retained positions	$39	$ 46	$—	$ —	$9,107	$ 9,906	$9	$ —
Total assets of VIEs [5]	$2,598	$ 4,274	$—	$ —	$21,822	$ 22,155	$2,250	$ 2,406
Consolidated VIEs								
Maximum loss exposure	$119	$ 149	$22,937	$ 25,859	$343	$ 420	$1,215	$ 1,442
On-balance sheet assets								
Trading account assets	$—	$ —	$—	$ —	$864	$ 1,428	$1,214	$ 1,454
Loans and leases	192	244	32,281	35,135	—	—	—	—
Allowance for loan and lease losses	(13)	(16)	(1,002)	(1,007)	—	—	—	—
All other assets	6	7	276	793	—	—	1	—
Total assets	$185	$ 235	$31,555	$ 34,921	$864	$ 1,428	$1,215	$ 1,454
On-balance sheet liabilities								
Short-term borrowings	$—	$ —	$—	$ —	$—	$ —	$122	$ 348
Long-term debt	82	108	8,598	9,049	521	1,008	—	12
All other liabilities	—	—	20	13	—	—	—	—
Total liabilities	$82	$ 108	$8,618	$ 9,062	$521	$ 1,008	$122	$ 360

(1) 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 reserve 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, 2017 and December 31, 2016, loans and leases in the consolidated credit card trust included $15.3 billion and $17.6 billion of seller's interest.

(3) At September 30, 2017 and December 31, 2016, all other assets in the consolidated credit card trust included restricted cash, certain short-term investments, and unbilled accrued interest and fees.

(4) The retained senior and subordinate securities were valued using quoted market prices or observable market inputs (Level 2 of the fair value hierarchy).

(5)

Total assets include loans the Corporation transferred with which it 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. This obligation is included in the maximum loss exposure in the table above. 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.

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.

For the nine months ended September 30, 2017, $3.1 billion of new senior debt securities were issued to third-party investors from the credit card securitization trust compared to $750 million for the same period in 2016.

At September 30, 2017 and December 31, 2016, the Corporation held subordinate securities issued by the credit card securitization trust with a notional principal amount of $7.4 billion and $7.5 billion. 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 $500 million of these subordinate securities issued for the nine months ended September 30, 2017 compared to $121 million for the same period in 2016.

Resecuritization Trusts

The Corporation transfers securities, typically MBS, into resecuritization vehicles at the request of customers seeking securities with specific characteristics. 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 $5.0 billion and $20.1 billion of securities during the three and nine months ended September 30, 2017 compared to $5.6 billion and $20.3 billion for the same periods in 2016. Securities transferred into resecuritization vehicles during the three and nine months ended September 30, 2017 and 2016 were measured at fair value with changes in fair value recorded in trading account profits prior to the resecuritization and no gain or loss on sale was recorded. Resecuritization proceeds included securities with an initial fair value of $855 million and $2.7 billion during the three and nine months ended September 30, 2017 compared to $430 million and $2.6 billion for the same periods in 2016. All of the securities received as resecuritization proceeds were classified as trading securities and were categorized 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's liquidity commitments to unconsolidated municipal bond trusts, including those for which the Corporation was transferor, totaled $1.6 billion at both September 30, 2017 and December 31, 2016. The weighted-average remaining life of bonds held in the trusts at September 30, 2017 was 5.6 years. There were no material write-downs or downgrades of assets or issuers during the nine months ended September 30, 2017 and 2016.

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, 2017 and December 31, 2016.

Other VIEs

	September 30, 2017			December 31, 2016		
(Dollars in millions)	Consolidated	Unconsolidated	Total	Consolidated	Unconsolidated	Total
Maximum loss exposure	$5,398	$ 19,676	$25,074	$6,114	$ 17,754	$23,868
On-balance sheet assets						
Trading account assets	$2,697	$ 303	$3,000	$2,358	$ 233	$2,591
Debt securities carried at fair value	—	197	197	—	122	122
Loans and leases	2,787	4,200	6,987	3,399	3,249	6,648
Allowance for loan and lease losses	(8)	(33)	(41)	(9)	(24)	(33)
Loans held-for-sale	66	843	909	188	464	652
All other assets	131	13,717	13,848	369	13,156	13,525
Total	$5,673	$ 19,227	$24,900	$6,305	$ 17,200	$23,505
On-balance sheet liabilities						
Long-term debt [(1)]	$256	$ —	$256	$395	$ —	$395
All other liabilities	32	3,146	3,178	24	2,959	2,983
Total	$288	$ 3,146	$3,434	$419	$ 2,959	$3,378
Total assets of VIEs	$5,673	$ 69,817	$75,490	$6,305	$ 62,269	$68,574

(1) Includes $13 million and $229 million of long-term debt at September 30, 2017 and December 31, 2016 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's maximum loss exposure to consolidated and unconsolidated customer vehicles totaled $2.4 billion and $2.9 billion at September 30, 2017 and December 31, 2016, 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 Corporation also had liquidity commitments, including written put options and collateral value guarantees, with certain unconsolidated vehicles of $55 million and $323 million at September 30, 2017 and December 31, 2016, 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. CDOs are generally 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. The

Corporation’s maximum loss exposure to consolidated and unconsolidated CDOs totaled $428 million and $430 million at September 30, 2017 and December 31, 2016.

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, 2017 and December 31, 2016, the Corporation’s consolidated investment vehicles had total assets of $683 million and $846 million. The Corporation also held investments in unconsolidated vehicles with total assets of $24.1 billion and $17.3 billion at September 30, 2017 and December 31, 2016. The Corporation’s maximum loss exposure associated with both consolidated and unconsolidated investment vehicles totaled $6.4 billion and $5.1 billion at September 30, 2017 and December 31, 2016 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 $90 million and $150 million, including a funded balance of $45 million and $75 million at September 30, 2017 and December 31, 2016, 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 $2.3 billion and $2.6 billion at September 30, 2017 and December 31, 2016. 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 $13.4 billion and $12.6 billion at September 30, 2017 and December 31, 2016. 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 $7.6 billion and $7.4 billion, including unfunded commitments to provide capital contributions of $2.8 billion and $2.7 billion at September 30, 2017 and December 31, 2016. 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 $293 million and $825 million, and reported pre-tax losses in other noninterest income of $209 million and $612 million for the three and nine months ended September 30, 2017. For the same periods in 2016, the Corporation recognized tax credits and other tax benefits of $337 million and $819 million, and pre-tax losses of $200 million and $596 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.

NOTE 7 Representations and Warranties Obligations and Corporate Guarantees

For information on representations and warranties obligations and corporate guarantees and related settlement actions, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2016 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, 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.

The following table presents unresolved repurchase claims at September 30, 2017 and December 31, 2016. 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 more information, see Private-label Securitizations and Whole-loan Sales Experience in the MD&A of the Corporation's 2016 Annual Report on Form 10-K, as well as Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Unresolved Repurchase Claims by Counterparty, Net of Duplicate Claims

(Dollars in millions)	September 30 2017	December 31 2016
By counterparty		
Private-label securitization trustees, whole-loan investors, including third-party securitization sponsors and other [1]	$ 16,019	$ 16,685

Monolines	1,578	1,583
GSEs	5	9
Total unresolved repurchase claims by counterparty, net of duplicate claims	$ 17,602	$ 18,277

(1) Includes $11.3 billion and $11.9 billion of claims based on individual file reviews and $4.7 billion and $4.8 billion of claims submitted without individual file reviews at September 30, 2017 and December 31, 2016.

During the nine months ended September 30, 2017, the Corporation received $71 million in new repurchase claims and $746 million in claims were resolved, including $640 million related to settlements. 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 a sponsor of third-party securitizations with whom the Corporation engaged in whole-loan transactions indicating that the Corporation may have indemnity obligations with respect to specific loans for which the Corporation has not received a repurchase request. These notifications were received prior to 2015, and totaled $1.3 billion at both September 30, 2017 and December 31, 2016. During the three months ended September 30, 2017, the Corporation reached an agreement with the party requesting indemnity, subject to acceptance of a settlement agreement by a securitization trustee; the impact of this agreement is included in the reserve for representations and warranties.

The presence of repurchase claims on a given trust, receipt of notices of indemnification obligations and receipt of other communications, as discussed above, are all factors that inform the Corporation’s reserve 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. For more information on private-label securitizations and whole-loan sales experience, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

At September 30, 2017 and December 31, 2016, the notional amount of unresolved repurchase claims submitted by private-label securitization trustees, whole-loan investors, including third-party securitization sponsors, and others was $16.0 billion and $16.7 billion. The notional amount of unresolved repurchase claims at September 30, 2017 and December 31, 2016 included $6.9 billion and $5.6 billion of claims related to loans in specific private-label securitization groups or tranches where the Corporation owns substantially all of the outstanding securities or will otherwise realize the benefit of any repurchase claims paid.

The overall decrease in the notional amount of outstanding unresolved repurchase claims in the nine months ended September 30, 2017 was primarily due to claims that were resolved as a result of settlements. 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.

Reserve for Representations and Warranties and Corporate Guarantees and Estimated Range of Possible Loss

The reserve 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 Corporation’s representations and warranties reserve and the corresponding estimated range of possible loss at September 30, 2017 considers, among other things, the repurchase experience implied in the settlements with BNY Mellon and other counterparties. Since the securitization trusts that were included in the settlements with BNY Mellon and other counterparties differ from other securitization trusts, the Corporation adjusts the experience implied by those prior settlements based on the characteristics of those trusts where the Corporation has a continuing possibility of timely claims in order to determine the representations and warranties reserve and the corresponding estimated range of possible loss.

The table below presents a rollforward of the reserve for representations and warranties and corporate guarantees.

Representations and Warranties and Corporate Guarantees

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Reserve for representations and warranties and corporate guarantees, beginning of period	$2,248	$2,723	$2,339	$11,326
Additions for new sales	1	1	3	3
Payments [1]	(297)	(23)	(385)	(8,687)
Provision	198	99	193	158
Reserve for representations and warranties and corporate guarantees, September 30	$2,150	$2,800	$2,150	$2,800

(1) In February 2016, the Corporation made an $8.5 billion settlement payment to BNY Mellon as part of the settlement with BNY Mellon.

The representations and warranties reserve represents the Corporation’s best estimate of probable incurred losses as of September 30, 2017. However, it is reasonably possible that future representations and warranties losses may occur in excess of the amounts recorded for these exposures. 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,

2017. 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, including related indemnity claims. 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. For more information on the reserve for representations and warranties exposures and the corresponding estimated range of possible loss, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, and Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2016 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, 2017 and December 31, 2016. The reporting units utilized for goodwill impairment testing are the operating segments or one level below. For additional information, see Note 8 – Goodwill and Intangible Assets to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Goodwill

(Dollars in millions)	September 30 2017	December 31 2016
Consumer Banking	$ 30,123	$ 30,123
Global Wealth & Investment Management	9,680	9,681
Global Banking	23,923	23,923
Global Markets	5,197	5,197
All Other	45	820
Less: Goodwill of business held for sale [1]	—	(775)
Total goodwill	$ 68,968	$ 68,969

(1) Reflects the goodwill assigned to the non-U.S. consumer credit card business, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. During the second quarter of 2017, the Corporation sold its non-U.S. consumer credit card business.

Intangible Assets

The table below presents the gross and net carrying values and accumulated amortization for intangible assets at September 30, 2017 and December 31, 2016.

Intangible Assets [1, 2]

(Dollars in millions)	September 30, 2017			December 31, 2016		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Purchased credit card and affinity relationships	$5,919	$ 5,553	$ 366	$6,830	$ 6,243	$ 587
Core deposit and other intangibles [3]	3,835	2,120	1,715	3,836	2,046	1,790
Customer relationships	3,886	3,509	377	3,887	3,275	612
Total intangible assets [4]	$13,640	$ 11,182	$ 2,458	$14,553	$ 11,564	$ 2,989

(1) Excludes fully amortized intangible assets.

(2) At both September 30, 2017 and December 31, 2016, none of the intangible assets were impaired.

(3) Includes $1.6 billion at both September 30, 2017 and December 31, 2016 of intangible assets associated with trade names that have an indefinite life and, accordingly, are not amortized.

(4) Includes $67 million at December 31, 2016 of intangible assets assigned to the non-U.S. consumer credit card business, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016.

Amortization of intangibles expense was $151 million and $473 million for the three and nine months ended September 30, 2017 compared to $181 million and $554 million for the same periods in 2016. The Corporation estimates aggregate amortization expense will be $147 million for the remainder of 2017, and $538 million, $105 million and $53 million for the years through 2020 and none for the years thereafter.

NOTE 9 Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings

The following table 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.

	Three Months Ended September 30				Nine Months Ended September 30			
	2017		2016		2017		2016	
(Dollars in millions)	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate
Federal funds sold and securities borrowed or purchased under agreements to resell								
Average during period	$223,585	1.17%	$214,254	0.50%	$222,255	1.00%	$215,476	0.50%
Maximum month-end balance during period	224,815	n/a	222,489	n/a	237,064	n/a	225,015	n/a
Federal funds purchased and securities loaned or sold under agreements to repurchase								
Average during period	$197,794	1.37%	$177,883	0.93%	$199,433	1.18%	$184,500	1.00%
Maximum month-end balance during period	197,604	n/a	192,536	n/a	218,017	n/a	196,631	n/a
Short-term borrowings								
Average during period	32,153	2.54	29,751	2.02	38,329	2.43	30,631	1.85
Maximum month-end balance during period	32,679	n/a	31,935	n/a	46,202	n/a	33,051	n/a

n/a = not applicable

Offsetting of Securities Financing Agreements

The Corporation enters into securities financing agreements to accommodate customers (also referred to as “matched-book transactions”), obtain securities to cover short positions, and to finance inventory positions. 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. For more information, see Note 10 – Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

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, 2017 and December 31, 2016. 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.

Securities Financing Agreements

	September 30, 2017				
(Dollars in millions)	Gross Assets/Liabilities (1)	Amounts Offset	Net Balance Sheet Amount	Financial Instruments (2)	Net Assets/Liabilities
Securities borrowed or purchased under agreements to resell (3)	$362,065	$(144,851)	$217,214	$(165,776)	$ 51,438
	$334,627	$(144,851)	$189,776	$(161,131)	$ 28,645

Securities loaned or sold under agreements to repurchase					
Other [4]	22,258	—	22,258	(22,258)	—
Total	$356,885	$(144,851)	$212,034	$(183,389)	$ 28,645
	December 31, 2016				
Securities borrowed or purchased under agreements to resell [3]	$326,970	$(128,746)	$198,224	$(154,974)	$ 43,250
Securities loaned or sold under agreements to repurchase	$299,028	$(128,746)	$170,282	$(140,774)	$ 29,508
Other [4]	14,448	—	14,448	(14,448)	—
Total	$313,476	$(128,746)	$184,730	$(155,222)	$ 29,508

(1) Includes activity where uncertainty exists as to the enforceability of certain master netting agreements under bankruptcy laws in some countries or industries.

(2) Financial instruments 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 derive a net asset or liability. Securities collateral received or pledged where the legal enforceability of the master netting agreements is uncertain is excluded from the table.

(3) Excludes repurchase activity of $11.1 billion and $10.1 billion reported in loans and leases on the Consolidated Balance Sheet at September 30, 2017 and December 31, 2016.

(4) Balance is reported in accrued expenses and other liabilities on the Consolidated Balance Sheet and 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.

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.

Remaining Contractual Maturity

	September 30, 2017				
(Dollars in millions)	Overnight and Continuous	30 Days or Less	After 30 Days Through 90 Days	Greater than 90 Days [1]	Total
Securities sold under agreements to repurchase	$119,610	$89,934	$41,358	$59,174	$310,076
Securities loaned	16,027	404	1,989	6,131	24,551
Other	22,258	—	—	—	22,258
Total	$157,895	$90,338	$43,347	$65,305	$356,885
	December 31, 2016				
Securities sold under agreements to repurchase	$129,853	$77,780	$31,851	$40,752	$280,236
Securities loaned	8,564	6,602	1,473	2,153	18,792
Other	14,448	—	—	—	14,448
Total	$152,865	$84,382	$33,324	$42,905	$313,476

(1) No agreements have maturities greater than three years.

Class of Collateral Pledged

	September 30, 2017			
(Dollars in millions)	Securities Sold Under Agreements to Repurchase	Securities Loaned	Other	Total
U.S. government and agency securities	$169,501	$—	$281	$169,782
Corporate securities, trading loans and other	8,933	1,339	443	10,715
Equity securities	30,483	17,892	21,479	69,854
Non-U.S. sovereign debt	95,997	5,320	55	101,372
Mortgage trading loans and ABS	5,162	—	—	5,162
Total	$310,076	$24,551	$22,258	$356,885
	December 31, 2016			
U.S. government and agency securities	$153,184	$—	$70	$153,254
Corporate securities, trading loans and other	11,086	1,630	127	12,843
Equity securities	24,007	11,175	14,196	49,378
Non-U.S. sovereign debt	84,171	5,987	55	90,213
Mortgage trading loans and ABS	7,788	—	—	7,788
Total	$280,236	$18,792	$14,448	$313,476

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 help 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.

NOTE 10 Commitments and Contingencies

In the normal course of business, the Corporation enters into a number of off-balance sheet commitments. These commitments expose the Corporation to varying degrees of credit and market risk and are subject to the same credit and market risk limitation reviews as those instruments recorded on the Consolidated Balance Sheet. For more information on commitments and contingencies, see Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Credit Extension Commitments

The Corporation enters into commitments to extend credit such as loan commitments, standby letters of credit (SBLCs) and commercial letters of credit to meet the financing needs of its customers. The table below includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g., syndicated or participated) to other financial institutions. The distributed amounts were $11.3 billion and $12.1

billion at September 30, 2017 and December 31, 2016. At September 30, 2017, the carrying value of these commitments, excluding commitments accounted for under the fair value option, was $780 million, including deferred revenue of $18 million and a reserve for unfunded lending commitments of $762 million. At December 31, 2016, the comparable amounts were $779 million, $17 million and $762 million, respectively. The carrying value of these commitments is classified in accrued expenses and other liabilities on the Consolidated Balance Sheet.

The table below also includes the notional amount of commitments of $4.9 billion and $7.0 billion at September 30, 2017 and December 31, 2016 that are accounted for under the fair value option. However, the table below excludes cumulative net fair value of $101 million and $173 million on these commitments, which is classified in accrued expenses and other liabilities. For more information regarding the Corporation's loan commitments accounted for under the fair value option, see Note 15 – Fair Value Option.

Credit Extension Commitments

	September 30, 2017				
(Dollars in millions)	Expire in One Year or Less	Expire After One Year Through Three Years	Expire After Three Years Through Five Years	Expire After Five Years	Total
Notional amount of credit extension commitments					
Loan commitments	$81,579	$133,609	$145,154	$18,639	$378,981
Home equity lines of credit	7,400	5,531	2,212	30,265	45,408
Standby letters of credit and other [1]	21,520	10,814	2,760	1,221	36,315
Letters of credit	1,220	102	95	80	1,497
Legally binding commitments	111,719	150,056	150,221	50,205	462,201
Credit card lines [2]	365,007	—	—	—	365,007
Total credit extension commitments	$476,726	$150,056	$150,221	$50,205	$827,208
	December 31, 2016				
Notional amount of credit extension commitments					
Loan commitments	$82,609	$133,063	$152,854	$22,129	$390,655
Home equity lines of credit	8,806	10,701	2,644	25,050	47,201
Standby letters of credit and financial guarantees [1]	19,165	10,754	3,225	1,027	34,171
Letters of credit	1,285	103	114	53	1,555
Legally binding commitments	111,865	154,621	158,837	48,259	473,582
Credit card lines [2]	377,773	—	—	—	377,773
Total credit extension commitments	$489,638	$154,621	$158,837	$48,259	$851,355

(1) 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 $26.5 billion and $8.2 billion at September 30, 2017, and $25.5 billion and $8.3 billion at December 31, 2016. Amounts in the table include consumer SBLCs of $375 million and $376 million at September 30, 2017 and December 31, 2016.

(2) 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.

Other Commitments

At September 30, 2017 and December 31, 2016, the Corporation had commitments to purchase loans (e.g., residential mortgage and commercial real estate) of $452 million and $767 million, and commitments to purchase commercial loans of $2.0 billion and $636 million, which upon settlement will be included in loans or LHFS.

At September 30, 2017 and December 31, 2016, the Corporation had commitments to purchase commodities, primarily liquefied natural gas of $1.6 billion and $1.9 billion, which upon

settlement will be included in trading account assets. At September 30, 2017 and December 31, 2016, the Corporation had commitments to enter into resale and forward-dated resale and securities borrowing agreements of $77.2 billion and $48.9 billion, and commitments to enter into forward-dated repurchase and securities lending agreements of $47.7 billion and $24.4 billion. These commitments expire primarily 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, 2017 and December 31, 2016, the Corporation's maximum purchase commitment was $345 million

and $475 million. In addition, the Corporation has a commitment to originate or purchase auto loans and leases from a strategic partner up to $950 million for the remainder of 2017, with this commitment expiring 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 $576 million, $2.3 billion, $2.1 billion, $1.9 billion and $1.6 billion for the remainder of 2017 and the years through 2021, respectively, and $5.8 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. At September 30, 2017 and December 31, 2016, the notional amount of these guarantees, which are recorded as derivatives totaled $14.0 billion and $13.9 billion. At both September 30, 2017 and December 31, 2016, the Corporation's maximum exposure related to these guarantees totaled $3.2 billion, with estimated maturity dates between 2031 and 2039. The net fair value including the fee receivable associated with these guarantees was $2 million and $4 million at September 30, 2017 and December 31, 2016, 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 servicers 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, 2017, the sponsored entities processed and settled $200.4 billion and $591.8 billion of transactions and recorded losses of $7 million and $22 million. 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. A significant portion of this activity was processed by a joint venture in which the Corporation holds a 49 percent ownership, and is recorded in other assets on the Consolidated Balance Sheet and in All Other. At both September 30, 2017 and December 31, 2016, the carrying value of the Corporation's investment in the merchant services joint venture was $2.9 billion.

As of September 30, 2017 and December 31, 2016, the maximum potential exposure for sponsored transactions totaled $334.9 billion and $325.7 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.

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 $6.7 billion at September 30, 2017 and December 31, 2016. 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.

Payment Protection Insurance Claims Matter

On June 1, 2017, the Corporation sold its non-U.S. consumer credit card business. Included in the calculation of the gain on sale, the Corporation recorded an obligation to indemnify the purchaser for substantially all PPI exposure above reserves assumed by the purchaser.

Litigation and Regulatory Matters

The following supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 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, 2017 and March 31, 2017 (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.

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 $140 million and $606 million was recognized for the three and nine months ended September 30, 2017 compared to $250 million and $908 million for the same periods in 2016.

For a limited number of the matters disclosed 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 previously 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 $1.5 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 has been provided 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 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.

NOTE 11 Shareholders’ Equity

Common Stock

Declared Quarterly Cash Dividends on Common Stock [1]

Declaration Date	Record Date	Payment Date	Dividend Per Share
October 25, 2017	December 1, 2017	December 29, 2017	$ 0.12
July 26, 2017	September 1, 2017	September 29, 2017	0.12
April 26, 2017	June 2, 2017	June 30, 2017	0.075
January 26, 2017	March 3, 2017	March 31, 2017	0.075

[1] In 2017 and through October 30, 2017.

During the three months ended September 30, 2017, the Corporation repurchased and retired 124 million shares of common stock in connection with the 2017 Comprehensive Capital Analysis and Review capital plan, which reduced shareholders' equity by $3.0 billion. This includes shares repurchased to offset the dilution resulting from certain

equity-based compensation awards.
The Corporation has warrants outstanding and exercisable to purchase 122 million shares of its common stock expiring on October 28, 2018, and warrants outstanding and exercisable to purchase 150 million shares of common stock expiring on January 16, 2019. These warrants were originally issued in connection with preferred stock issuances to the U.S. Department of the Treasury in 2009 and 2008, and 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 2017 dividend of $0.12 per common share, the exercise price of the warrants expiring on January 16, 2019 was adjusted to $12.807 per share. The warrants expiring on October 28, 2018, which have an exercise price of $30.79 per share, 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.
On August 24, 2017, the holders of the Corporation's Series T 6% Non-cumulative preferred stock (Series T) exercised warrants to acquire 700 million shares of the Corporation's common stock. The carrying amount of the preferred stock was $2.9 billion and, upon conversion, was recorded as additional paid-in capital. For additional information, see Note 13 - Earnings Per Common Share. During the nine months ended September 30, 2017, in connection with employee stock plans, the Corporation issued approximately 66 million shares and repurchased approximately 27 million shares of its common stock to satisfy tax withholding obligations. At September 30, 2017, the Corporation had reserved 873 million unissued shares of common stock for future issuances under employee stock plans, common stock warrants, convertible notes and preferred stock.
Preferred Stock
During the three and nine months ended September 30, 2017, the Corporation recognized cash dividends of $465 million and $1.3 billion. There were no issuances of preferred stock during the nine months ended September 30, 2017.

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, 2017 and 2016.

(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, 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)
Balance, December 31, 2016	$ (1,299)	$ 32	$ (767)	$ (895)	$ (3,480)	$ (879)	$ (7,288)
Net change	945	(14)	(149)	156	80	102	1,120
Balance, September 30, 2017	$ (354)	$ 18	$ (916)	$ (739)	$ (3,400)	$ (777)	$ (6,168)

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, 2017 and 2016.

Changes in OCI Components Before- and After-tax

	Nine Months Ended September 30					
	2017			2016		
(Dollars in millions)	Before-tax	Tax effect	After-tax	Before-tax	Tax effect	After-tax
Debt securities:						
Net increase in fair value	$ 1,757	$ (657)	$ 1,100	$ 5,896	$ (2,239)	$ 3,657
Reclassifications into earnings:						
Gains on sales of debt securities	(278)	106	(172)	(490)	186	(304)
Other income	33	(16)	17	14	(5)	9
Net realized gains reclassified into earnings	(245)	90	(155)	(476)	181	(295)
Net change	1,512	(567)	945	5,420	(2,058)	3,362
Available-for-sale marketable equity securities:						
Net increase (decrease) in fair value	45	(17)	28	(70)	27	(43)
Net realized gains reclassified into earnings [2]	(67)	25	(42)	—	—	—
Net change	(22)	8	(14)	(70)	27	(43)
Debit valuation adjustments:						
Net increase (decrease) in fair value	(255)	96	(159)	61	(23)	38
Net realized losses reclassified into earnings [2]	30	(20)	10	18	(7)	11
Net change	(225)	76	(149)	79	(30)	49
Derivatives:						
Net increase (decrease) in fair value	79	(30)	49	(64)	23	(41)
Reclassifications into earnings:						
Net interest income	274	(103)	171	447	(167)	280
Personnel	(103)	39	(64)	61	(23)	38
Net realized losses reclassified into earnings	171	(64)	107	508	(190)	318
Net change	250	(94)	156	444	(167)	277
Employee benefit plans:						
Reclassifications into earnings:						
Prior service cost	3	(1)	2	3	(1)	2

Net actuarial losses	125	(47)	78	61	(24)	37
Net realized losses reclassified into earnings [3]	128	(48)	80	64	(25)	39
Settlements, curtailments and other	—	—	—	—	(10)	(10)
Net change	128	(48)	80	64	(35)	29
Foreign currency:						
Net increase (decrease) in fair value	(454)	462	8	123	(140)	(17)
Net gains reclassified into earnings [1,2]	(608)	702	94	—	—	—
Net change	(1,062)	1,164	102	123	(140)	(17)
Total other comprehensive income (loss)	$581	$539	$ 1,120	$6,060	$(2,403)	$ 3,657

(1) The nine months ended September 30, 2017 included a pre-tax gain on derivatives and related income tax expense associated with the Corporation's net investment in its non-U.S. consumer credit card business, which was sold during the second quarter of 2017. The derivative gain was partially offset by a loss on the related foreign currency translation adjustment.

(2) Reclassifications of pre-tax AFS marketable equity securities, DVA and foreign currency are recorded in other income in the Consolidated Statement of Income.

(3) Reclassifications of pre-tax employee benefit plan costs are recorded in personnel expense in the Consolidated Statement of Income.

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, 2017 and 2016 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 2016 Annual Report on Form 10-K.

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions, except per share information; shares in thousands)	2017	2016	2017	2016
Earnings per common share				
Net income	$5,587	$ 4,955	$15,712	$ 13,210
Preferred stock dividends	(465)	(503)	(1,328)	(1,321)
Net income applicable to common shareholders	$5,122	$ 4,452	$14,384	$ 11,889
Average common shares issued and outstanding	10,197,891	10,250,124	10,103,386	10,312,878
Earnings per common share	$0.50	$ 0.43	$1.42	$ 1.15
Diluted earnings per common share				
Net income applicable to common shareholders	$5,122	$ 4,452	$14,384	$ 11,889
Add preferred stock dividends due to assumed conversions [(1)]	36	75	186	225
Net income allocated to common shareholders	$5,158	$ 4,527	$14,570	$ 12,114
Average common shares issued and outstanding	10,197,891	10,250,124	10,103,386	10,312,878
Dilutive potential common shares [(2)]	527,591	750,349	717,039	733,929
Total diluted average common shares issued and outstanding	10,725,482	11,000,473	10,820,425	11,046,807
Diluted earnings per common share	$0.48	$ 0.41	$1.35	$ 1.10

(1) Represents the Series T dividends under the "if-converted" method prior to conversion.
(2) Includes incremental dilutive shares from restricted stock units, restricted stock and warrants.

In connection with an investment in the Corporation’s Series T preferred stock in 2011, the Series T holders also received warrants to purchase 700 million shares of the Corporation’s common stock at an exercise price of $7.142857 per share. On August 24, 2017, the Series T holders exercised the warrants and acquired the 700 million shares of the Corporation’s common stock using the Series T preferred stock as consideration for the exercise price, which increased common shares outstanding, but had no effect on diluted earnings per share as this conversion had been included in the Corporation’s diluted earnings per share calculation under the applicable accounting guidance. The use of the Series T preferred stock as consideration represents a non-cash financing activity and, accordingly, is not reflected in the Consolidated Statement of Cash Flows. For the three and nine months ended September 30, 2016, 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, 2017 and 2016, 62 million average dilutive potential common shares associated with the Series L preferred stock 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, 2017, average options to purchase 18 million and 22 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 42 million and 46 million for the same periods in 2016. For both the three and nine months ended September 30, 2017 and 2016, 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 under the treasury stock method.

NOTE 14 Fair Value Measurements

Under applicable accounting standards, 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 under applicable accounting standards and conducts a review of its fair value hierarchy classifications on a quarterly basis. Transfers into or out of fair value hierarchy classifications are considered to be effective as of the beginning of the quarter in which they occur. During the nine months ended September 30, 2017, there were no changes to valuation approaches or techniques that had, or are expected to have, a material impact on the Corporation’s consolidated financial position or results of operations.

For more information regarding the fair value hierarchy and how the Corporation measures fair value and valuation processes and techniques, see Note 1 – Summary of Significant Accounting Principles and Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2016 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.

Recurring Fair Value

Assets and liabilities carried at fair value on a recurring basis at September 30, 2017 and December 31, 2016, including financial instruments which the Corporation accounts for under the fair value option, are summarized in the following tables.

	September 30, 2017 Fair Value Measurements				
(Dollars in millions)	Level 1	Level 2	Level 3	Netting Adjustments (1)	Assets/Liabilities at Fair Value
Assets					
Federal funds sold and securities borrowed or purchased under agreements to resell	$—	$56,780	$—	$—	$ 56,780
Trading account assets:					
U.S. Treasury and agency securities (2)	32,688	589	—	—	33,277
Corporate securities, trading loans and other	535	27,760	1,742	—	30,037
Equity securities	58,886	29,149	244	—	88,279
Non-U.S. sovereign debt	16,623	14,346	552	—	31,521
Mortgage trading loans, MBS and ABS:					
U.S. government-sponsored agency guaranteed (2)	—	18,973	—	—	18,973
Mortgage trading loans, ABS and other MBS	—	6,980	1,252	—	8,232
Total trading account assets (3)	108,732	97,797	3,790	—	210,319
Derivative assets (4, 5)	6,756	360,066	3,878	(332,316)	38,384
AFS debt securities:					
U.S. Treasury and agency securities	48,591	1,677	—	—	50,268
Mortgage-backed securities:					
Agency	—	196,194	—	—	196,194
Agency-collateralized mortgage obligations	—	7,049	—	—	7,049
Non-agency residential	—	2,657	—	—	2,657
Commercial	—	12,464	—	—	12,464
Non-U.S. securities	774	4,630	36	—	5,440
Other taxable securities	—	6,555	483	—	7,038
Tax-exempt securities	—	18,725	467	—	19,192
Total AFS debt securities	49,365	249,951	986	—	300,302
Other debt securities carried at fair value:					
Mortgage-backed securities:					
Agency-collateralized mortgage obligations	—	5	—	—	5
Non-agency residential	—	3,036	22	—	3,058
Non-U.S. securities	11,911	1,349	—	—	13,260
Other taxable securities	—	239	—	—	239
Total other debt securities carried at fair value	11,911	4,629	22	—	16,562
Loans and leases	—	5,667	618	—	6,285
Mortgage servicing rights (6)	—	—	2,407	—	2,407
Loans held-for-sale	—	2,353	775	—	3,128
Customer and other receivables	—	230	—	—	230
Other assets	17,991	1,083	267	—	19,341
Total assets	$194,755	$778,556	$12,743	$(332,316)	$ 653,738
Liabilities					
Interest-bearing deposits in U.S. offices	$—	$468	$—	$—	$ 468
	—	38,852	—	—	38,852

Federal funds purchased and securities loaned or sold under agreements to repurchase					
Trading account liabilities:					
U.S. Treasury and agency securities	20,390	366	—	—	20,756
Equity securities	31,647	4,018	—	—	35,665
Non-U.S. sovereign debt	16,606	4,118	—	—	20,724
Corporate securities and other	211	9,053	25	—	9,289
Total trading account liabilities	68,854	17,555	25	—	86,434
Derivative liabilities (4, 5)	6,589	349,863	5,901	(330,572)	31,781
Short-term borrowings	—	1,904	—	—	1,904
Accrued expenses and other liabilities	21,121	1,239	9	—	22,369
Long-term debt	—	28,007	1,890	—	29,897
Total liabilities	$96,564	$437,888	$7,825	$(330,572)	$ 211,705

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes $19.5 billion of GSE obligations.

(3) Includes securities with a fair value of $15.3 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, 2017, $3.0 billion of derivative assets and $2.4 billion of derivative liabilities were transferred from Level 1 to Level 2 and $543 million of derivative assets and $496 million 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) Derivative assets and liabilities reflect the effects of contractual amendments by two central clearing counterparties to legally re-characterize daily cash variation margin from collateral, which secures an outstanding exposure, to settlement, which discharges an outstanding exposure. One of these central clearing counterparties amended its governing documents, which became effective in January 2017. In addition, the Corporation elected to transfer its existing positions to the settlement platform for the other central clearing counterparty in September 2017.

(6) MSRs include the $1.7 billion core MSR portfolio held in Consumer Banking, the $162 million non-core MSR portfolio held in All Other and the $518 million non-U.S. MSR portfolio held in Global Markets.

(Dollars in millions)	December 31, 2016 Fair Value Measurements Level 1	Level 2	Level 3	Netting Adjustments (1)	Assets/Liabilities at Fair Value
Assets					
Federal funds sold and securities borrowed or purchased under agreements to resell	$—	$49,750	$—	$—	$ 49,750
Trading account assets:					
U.S. Treasury and agency securities (2)	34,587	1,927	—	—	36,514
Corporate securities, trading loans and other	171	22,861	2,777	—	25,809
Equity securities	50,169	21,601	281	—	72,051
Non-U.S. sovereign debt	9,578	9,940	510	—	20,028
Mortgage trading loans, MBS and ABS:					
U.S. government-sponsored agency guaranteed (2)	—	15,799	—	—	15,799
Mortgage trading loans, ABS and other MBS	—	8,797	1,211	—	10,008
Total trading account assets (3)	94,505	80,925	4,779	—	180,209
Derivative assets (4)	7,337	619,848	3,931	(588,604)	42,512
AFS debt securities:					
U.S. Treasury and agency securities	46,787	1,465	—	—	48,252
Mortgage-backed securities:					
Agency	—	189,486	—	—	189,486
Agency-collateralized mortgage obligations	—	8,330	—	—	8,330
Non-agency residential	—	2,013	—	—	2,013
Commercial	—	12,322	—	—	12,322
Non-U.S. securities	1,934	3,600	229	—	5,763
Other taxable securities	—	10,020	594	—	10,614
Tax-exempt securities	—	16,618	542	—	17,160
Total AFS debt securities	48,721	243,854	1,365	—	293,940
Other debt securities carried at fair value:					
Mortgage-backed securities:					
Agency-collateralized mortgage obligations	—	5	—	—	5
Non-agency residential	—	3,114	25	—	3,139
Non-U.S. securities	15,109	1,227	—	—	16,336
Other taxable securities	—	240	—	—	240
Total other debt securities carried at fair value	15,109	4,586	25	—	19,720
Loans and leases	—	6,365	720	—	7,085
Mortgage servicing rights (5)	—	—	2,747	—	2,747
Loans held-for-sale	—	3,370	656	—	4,026
Debt securities in assets of business held for sale	619	—	—	—	619
Other assets	11,824	1,739	239	—	13,802
Total assets	$178,115	$1,010,437	$14,462	$(588,604)	$ 614,410
Liabilities					
Interest-bearing deposits in U.S. offices	$—	$731	$—	$—	$ 731
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	35,407	359	—	35,766
Trading account liabilities:					
U.S. Treasury and agency securities	15,854	197	—	—	16,051
Equity securities	25,884	3,014	—	—	28,898

Non-U.S. sovereign debt	9,409	2,103	—	—	11,512
Corporate securities and other	163	6,380	27	—	6,570
Total trading account liabilities	51,310	11,694	27	—	63,031
Derivative liabilities [4]	7,173	615,896	5,244	(588,833)	39,480
Short-term borrowings	—	2,024	—	—	2,024
Accrued expenses and other liabilities	12,978	1,643	9	—	14,630
Long-term debt	—	28,523	1,514	—	30,037
Total liabilities	$71,461	$695,918	$7,153	$(588,833)	$ 185,699

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes $17.5 billion of GSE obligations.

(3) Includes securities with a fair value of $14.6 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 2016, $2.3 billion of derivative assets and $2.4 billion of derivative liabilities were transferred from Level 1 to Level 2 and $2.0 billion of derivative assets and $1.8 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) MSRs include the $2.1 billion core MSR portfolio held in Consumer Banking, the $212 million non-core MSR portfolio held in All Other and the $469 million non-U.S. MSR portfolio held in Global Markets.

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, 2017 and 2016, including net realized and unrealized gains (losses) included in earnings and accumulated OCI.

Level 3 – Fair Value Measurements (1)

Three Months Ended September 30, 2017

(Dollars in millions)	Balance July 1 2017	Total Realized/Unrealized Gains/(Losses) (2)	Gross Gains (Losses) in OCI (3)	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2017	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held (2)
Trading account assets:											
Corporate securities, trading loans and other	$1,777	$ 77	$ —	$35	$(79)	$ 5	$ (208)	$ 288	$ (153)	$ 1,742	$ 35
Equity securities	229	8	—	3	(3)	—	—	17	(10)	244	10
Non-U.S. sovereign debt	506	33	18	—	—	—	(5)	—	—	552	33
Mortgage trading loans, ABS and other MBS	1,232	10	(1)	150	(157)	—	(46)	83	(19)	1,252	(2)
Total trading account assets	3,744	128	17	188	(239)	5	(259)	388	(182)	3,790	76
Net derivative assets (4)	(1,803)	(252)	—	150	(367)	—	278	7	(36)	(2,023)	(283)
AFS debt securities:											
Non-U.S. securities	139	1	4	7	—	—	(115)	—	—	36	—
Other taxable securities	483	—	1	—	—	—	(1)	—	—	483	—
Tax-exempt securities	518	—	1	—	—	—	(7)	—	(45)	467	—
Total AFS debt securities	1,140	1	6	7	—	—	(123)	—	(45)	986	—
Other debt securities carried at fair value – Non-agency residential MBS	23	—	—	—	—	—	(1)	—	—	22	—
Loans and leases (5, 6)	667	2	—	2	(24)	—	(29)	—	—	618	2
Mortgage servicing rights (6, 7)	2,501	54	—	—	(28)	69	(189)	—	—	2,407	(20)
Loans held-for-sale (5)	766	38	10	—	(4)	—	(93)	58	—	775	27
Other assets	294	70	(43)	—	(52)	—	(2)	—	—	267	28
Federal funds purchased and securities loaned or sold under agreements to repurchase (5)	(135)	—	—	—	—	—	135	—	—	—	—
Trading account liabilities – Corporate securities and other	(22)	1	—	—	(3)	(1)	—	—	—	(25)	—
Accrued expenses and other liabilities (5)	(9)	—	—	—	—	—	—	—	—	(9)	—
Long-term debt (5)	(1,646)	(87)	(7)	63	—	(129)	115	(244)	45	(1,890)	(87)

(1) Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

(2) Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - primarily trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt -

trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve, and periodic adjustments to the valuation model to reflect changes in the modeled relationships between inputs and projected cash flows, as well as changes in cash flow assumptions including cost to service.

(3) Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation adjustments and the impact of changes in the Corporation’s credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

(4) Net derivatives include derivative assets of $3.9 billion and derivative liabilities of $5.9 billion.

(5) Amounts represent instruments that are accounted for under the fair value option.

(6) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.

(7) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Significant transfers into Level 3, primarily due to decreased price observability, during the three months ended September 30, 2017 included $388 million of trading account assets and $244 million of long-term debt. Transfers occur on a regular basis for 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, 2017 included $182 million of trading account assets.

Level 3 – Fair Value Measurements[1]

Three Months Ended September 30, 2016

(Dollars in millions)	Balance July 1 2016	Total Realized/Unrealized Gains/(Losses) [2]	Gross Gains (Losses) in OCI [3]	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2016	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held [2]
Trading account assets:											
Corporate securities, trading loans and other	$2,654	$ 57	$ —	$226	$(245)	$ —	$(134)	$202	$(198)	$2,562	$ 20
Equity securities	455	11	—	10	(98)	—	—	27	(39)	366	5
Non-U.S. sovereign debt	630	20	(7)	—	—	—	(4)	—	—	639	19
Mortgage trading loans, ABS and other MBS	1,286	102	—	331	(441)	—	(103)	15	(24)	1,166	62
Total trading account assets	5,025	190	(7)	567	(784)	—	(241)	244	(261)	4,733	106
Net derivative assets [4]	(648)	(131)	—	114	(346)	—	118	(53)	(41)	(987)	(198)
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	28	(2)	—	—	—	—	—	—	—	26	—
Loans and leases [5, 6]	1,459	(9)	—	—	—	—	(54)	—	(41)	1,355	(8)
Mortgage servicing rights [6, 7]	2,269	313	—	—	—	101	(206)	—	—	2,477	262
Loans held-for-sale [5]	690	13	(4)	—	(56)	—	(25)	4	(35)	587	10
Other assets	348	11	—	4	—	—	—	—	—	363	17
Federal funds purchased and securities loaned or sold under agreements to repurchase [5]	(313)	(17)	—	—	—	—	10	(19)	1	(338)	(17)
Trading account liabilities – Corporate securities and other	(26)	2	—	—	(2)	—	—	—	—	(26)	1
Accrued expenses and other liabilities [5]	(9)	—	—	—	—	—	—	—	—	(9)	—
Long-term debt [5]	(2,156)	(22)	(23)	15	—	(3)	363	(206)	98	(1,934)	(24)

(1) Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

(2) Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt - trading

account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due principally to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve.

(3) Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation adjustments and the impact of changes in the Corporation’s credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

(4) Net derivatives include derivative assets of $4.9 billion and derivative liabilities of $5.9 billion.

(5) Amounts represent instruments that are accounted for under the fair value option.

(6) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.

(7) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

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 and $206 million of long-term debt. Transfers occur on a regular basis for 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.

Level 3 – Fair Value Measurements[1]

(Dollars in millions)	Balance January 1 2017	Total Realized/Unrealized Gains/(Losses) [2]	Gross Gains (Losses) in OCI [3]	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2017	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held [2]
	Nine Months Ended September 30, 2017										
Trading account assets:											
Corporate securities, trading loans and other	$2,777	$ 225	$ —	$353	$(679)	$ 5	$ (443)	$ 506	$(1,002)	$ 1,742	$ 72
Equity securities	281	23	—	45	(67)	—	(10)	119	(147)	244	11
Non-U.S. sovereign debt	510	64	12	26	(59)	—	(73)	72	—	552	60
Mortgage trading loans, ABS and other MBS	1,211	195	(2)	747	(846)	—	(169)	187	(71)	1,252	107
Total trading account assets	4,779	507	10	1,171	(1,651)	5	(695)	884	(1,220)	3,790	250
Net derivative assets [4]	(1,313)	(1,098)	—	558	(843)	—	722	36	(85)	(2,023)	(561)
AFS debt securities:											
Non-U.S. securities	229	2	16	49	—	—	(260)	—	—	36	—
Other taxable securities	594	3	6	5	—	—	(31)	—	(94)	483	—
Tax-exempt securities	542	—	1	—	(56)	—	(10)	35	(45)	467	—
Total AFS debt securities	1,365	5	23	54	(56)	—	(301)	35	(139)	986	—
Other debt securities carried at fair value – Non-agency residential MBS	25	(1)	—	—	—	—	(2)	—	—	22	—
Loans and leases [5, 6]	720	20	—	2	(24)	—	(93)	—	(7)	618	18
Mortgage servicing rights [6, 7]	2,747	40	—	—	(22)	207	(565)	—	—	2,407	(202)
Loans held-for-sale [5]	656	109	7	2	(159)	—	(281)	473	(32)	775	60
Other assets	239	53	(31)	2	(52)	—	(8)	64	—	267	21
Federal funds purchased and securities loaned or sold under agreements to repurchase [5]	(359)	(5)	—	—	—	(12)	171	(58)	263	—	(5)
Trading account liabilities – Corporate securities and other	(27)	13	—	4	(13)	(2)	—	—	—	(25)	(1)
Accrued expenses and other liabilities [5]	(9)	—	—	—	—	—	—	—	—	(9)	—
Long-term debt [5]	(1,514)	(160)	(18)	81	—	(279)	398	(530)	132	(1,890)	(158)

(1) Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

(2) Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - primarily trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt -

trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve, and periodic adjustments to the valuation model to reflect changes in the modeled relationships between inputs and projected cash flows, as well as changes in cash flow assumptions including cost to service.

(3) Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

(4) Net derivatives include derivative assets of $3.9 billion and derivative liabilities of $5.9 billion.

(5) Amounts represent instruments that are accounted for under the fair value option.

(6) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.

(7) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Significant transfers into Level 3, primarily due to decreased price observability, during the nine months ended September 30, 2017 included $884 million of trading account assets, $473 million of LHFS and $530 million of long-term debt. Transfers occur on a regular basis for 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, 2017 included $1.2 billion of trading account assets, $139 million of AFS debt securities, $263 million of federal funds purchased and securities loaned or sold under agreements to repurchase and $132 million of long-term debt.

Level 3 – Fair Value Measurements[1]

Nine Months Ended September 30, 2016

(Dollars in millions)	Balance January 1 2016	Total Realized/Unrealized Gains/(Losses) [2]	Gains (Losses) in OCI [3]	Gross Purchases	Gross Sales	Gross Issuances	Gross Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30 2016	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held [2]
Trading account assets:											
Corporate securities, trading loans and other	$2,838	$ 118	$ 2	$925	$(638)	$ —	$ (479)	$ 432	$ (636)	$ 2,562	$ 11
Equity securities	407	93	—	53	(135)	—	(72)	60	(40)	366	(19)
Non-U.S. sovereign debt	521	112	91	3	(1)	—	(87)	—	—	639	110
Mortgage trading loans, ABS and other MBS	1,868	197	(2)	681	(1,264)	—	(270)	91	(135)	1,166	110
Total trading account assets	5,634	520	91	1,662	(2,038)	—	(908)	583	(811)	4,733	212
Net derivative assets [4]	(441)	356	—	313	(965)	—	7	(177)	(80)	(987)	(108)
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 [5, 6]	1,620	(13)	—	69	—	50	(143)	6	(234)	1,355	(3)
Mortgage servicing rights [6, 7]	3,087	(295)	—	—	—	307	(622)	—	—	2,477	(457)
Loans held-for-sale [5]	787	97	51	20	(236)	—	(77)	43	(98)	587	76
Other assets	374	(27)	—	38	—	—	(24)	2	—	363	(15)
Federal funds purchased and securities loaned or sold under agreements to repurchase [5]	(335)	12	—	—	—	(14)	17	(19)	1	(338)	(21)
Trading account liabilities – Corporate securities and other	(21)	4	—	1	(10)	—	—	—	—	(26)	3
Short-term borrowings [5]	(30)	1	—	—	—	—	29	—	—	—	—
Accrued expenses and other liabilities [5]	(9)	—	—	—	—	—	—	—	—	(9)	—
Long-term debt [5]	(1,513)	(192)	(41)	44	—	(326)	496	(751)	349	(1,934)	(208)

[1] Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

(2) Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt - primarily trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due principally to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve.

(3) Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation adjustments and the impact of changes in the Corporation’s credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

(4) Net derivatives include derivative assets of $4.9 billion and derivative liabilities of $5.9 billion.

(5) Amounts represent instruments that are accounted for under the fair value option.

(6) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.

(7) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

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 and $751 million of long-term debt. Transfers occur on a regular basis for 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 and $349 million of long-term debt.

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, 2017 and December 31, 2016.

Quantitative Information about Level 3 Fair Value Measurements at September 30, 2017

(Dollars in millions)			Inputs			
Financial Instrument	Fair Value	Valuation Technique	Significant Unobservable Inputs	Ranges of Inputs	Weighted Average	
Loans and Securities (1)						
Instruments backed by residential real estate assets	$914		Yield	0% to 25%	6	%
Trading account assets – Mortgage trading loans, ABS and other MBS	293	Discounted cash flow	Prepayment speed	0% to 22% CPR	12	%
Loans and leases	617		Default rate	0% to 3% CDR	2	%
Loans held-for-sale	4		Loss severity	0% to 54%	18	%
Instruments backed by commercial real estate assets	$264		Yield	0% to 25%	6	%
Trading account assets – Corporate securities, trading loans and other	218	Discounted cash flow	Price	$0 to $100	$68	
Trading account assets – Mortgage trading loans, ABS and other MBS	46					
Commercial loans, debt securities and other	$3,754		Yield	0% to 12%	4	%
Trading account assets – Corporate securities, trading loans and other	1,498		Prepayment speed	10% to 20%	15	%
Trading account assets – Non-U.S. sovereign debt	552		Default rate	3% to 4%	4	%
Trading account assets – Mortgage trading loans, ABS and other MBS	913	Discounted cash flow, Market comparables	Loss severity	35% to 40%	37	%
AFS debt securities – Other taxable securities	19		Price	$0 to $185	$63	
Loans and leases	1					
Loans held-for-sale	771					
Auction rate securities	$957		Price	$10 to $100	$94	
Trading account assets – Corporate securities, trading loans and other	26	Discounted cash flow, Market comparables				
	464					

AFS debt securities – Other taxable securities					
AFS debt securities – Tax-exempt securities	467				
MSRs	$2,407	Discounted cash flow	Weighted-average life, fixed rate (4)	0 to 14 years	5 years
			Weighted-average life, variable rate (4)	0 to 10 years	3 years
			Option Adjusted Spread, fixed rate	9% to 14%	10%
			Option Adjusted Spread, variable rate	9% to 15%	12%
Structured liabilities					
Long-term debt	$(1,890)	Discounted cash flow, Market comparables, Industry standard derivative pricing (2)	Equity correlation	3% to 100%	64%
			Long-dated equity volatilities	4% to 76%	22%
			Yield	7.5%	n/a
			Price	$0 to $100	$65
Net derivative assets					
Credit derivatives	$(325)	Discounted cash flow, Stochastic recovery correlation model	Yield	1% to 5%	3%
			Upfront points	0 points to 100 points	73 points
			Credit correlation	12% to 90%	58%
			Prepayment speed	15% to 20% CPR	16%
			Default rate	1% to 4% CDR	2%
			Loss severity	35%	n/a
			Price	$0 to $102	$76
Equity derivatives	$(2,235)	Industry standard derivative pricing (2)	Equity correlation	3% to 100%	64%
			Long-dated equity volatilities	4% to 76%	22%
Commodity derivatives	$2	Discounted cash flow, Industry standard derivative pricing (2)	Natural gas forward price	$2/MMBtu to $6/MMBtu	$3/MMBtu
			Correlation	68% to 90%	85%
			Volatilities	25% to 90%	49%
Interest rate derivatives	$535	Industry standard derivative pricing (3)	Correlation (IR/IR)	15% to 90%	53%
			Correlation (FX/IR)	0% to 46%	1%
			Long-dated inflation rates	-10% to 38%	6%
			Long-dated inflation volatilities	0% to 1%	1%
Total net derivative assets	$(2,023)				

(1) 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 114: Trading account assets – Corporate securities, trading loans and other of $1.7 billion, Trading account assets – Non-U.S. sovereign debt of $552 million, Trading account assets – Mortgage trading loans, ABS and other MBS of $1.3 billion, AFS debt securities – Other taxable securities of $483 million, AFS debt securities – Tax-exempt securities of $467 million, Loans and leases of $618 million and LHFS of $775 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.

(4) The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions.

CPR = Constant Prepayment Rate
CDR = Constant Default Rate
MMBtu = Million British thermal units
IR = Interest Rate
FX = Foreign Exchange
n/a = not applicable

Quantitative Information about Level 3 Fair Value Measurements at December 31, 2016

(Dollars in millions) Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average	
Loans and Securities [1]						
Instruments backed by residential real estate assets	$1,066		Yield	0% to 50%	7	%
Trading account assets – Mortgage trading loans, ABS and other MBS	337	Discounted cash flow, Market comparables	Prepayment speed	0% to 27% CPR	14	%
Loans and leases	718		Default rate	0% to 3% CDR	2	%
Loans held-for-sale	11		Loss severity	0% to 54%	18	%
Instruments backed by commercial real estate assets	$317		Yield	0% to 39%	11	%
Trading account assets – Corporate securities, trading loans and other	178	Discounted cash flow, Market comparables	Price	$0 to $100	$65	
Trading account assets – Mortgage trading loans, ABS and other MBS	53					
Loans held-for-sale	86					
Commercial loans, debt securities and other	$4,486		Yield	1% to 37%	14	%
Trading account assets – Corporate securities, trading loans and other	2,565		Prepayment speed	5% to 20%	19	%
Trading account assets – Non-U.S. sovereign debt	510	Discounted cash flow, Market comparables	Default rate	3% to 4%	4	%
Trading account assets – Mortgage trading loans, ABS and other MBS	821		Loss severity	0% to 50%	19	%
AFS debt securities – Other taxable securities	29		Price	$0 to $292	$68	
Loans and leases	2		Duration	0 to 5 years	3 years	
Loans held-for-sale	559		Enterprise value/EBITDA multiple	34x	n/a	
Auction rate securities	$1,141	Discounted cash flow, Market comparables	Price	$10 to $100	$94	
Trading account assets – Corporate securities, trading loans and other	34					
AFS debt securities – Other taxable securities	565					
	542					

AFS debt securities – Tax-exempt securities						
MSRs	$2,747	Discounted cash flow	Weighted-average life, fixed rate (4)	0 to 15 years	6 years	
			Weighted-average life, variable rate (4)	0 to 14 years	4 years	
			Option Adjusted Spread, fixed rate	9% to 14%	10	%
			Option Adjusted Spread, variable rate	9% to 15%	12	%
Structured liabilities						
Long-term debt	$(1,514)	Discounted cash flow, Market comparables Industry standard derivative pricing (2)	Equity correlation	13% to 100%	68	%
			Long-dated equity volatilities	4% to 76%	26	%
			Yield	6% to 37%	20	%
			Price	$12 to $87	$73	
			Duration	0 to 5 years	3 years	
Net derivative assets						
Credit derivatives	$(129)	Discounted cash flow, Stochastic recovery correlation model	Yield	0% to 24%	13	%
			Upfront points	0 to 100 points	72 points	
			Credit spreads	17 bps to 814 bps	248 bps	
			Credit correlation	21% to 80%	44	%
			Prepayment speed	10% to 20% CPR	18	%
			Default rate	1% to 4% CDR	3	%
			Loss severity	35 %	n/a	
Equity derivatives	$(1,690)	Industry standard derivative pricing (2)	Equity correlation	13% to 100%	68	%
			Long-dated equity volatilities	4% to 76%	26	%
Commodity derivatives	$6	Discounted cash flow, Industry standard derivative pricing (2)	Natural gas forward price	$2/MMBtu to $6/MMBtu	$4/MMBtu	
			Correlation	66% to 95%	85	%
			Volatilities	23% to 96%	36	%
Interest rate derivatives	$500	Industry standard derivative pricing (3)	Correlation (IR/IR)	15% to 99%	56	%
			Correlation (FX/IR)	0% to 40%	2	%
			Illiquid IR and long-dated inflation rates	-12% to 35%	5	%
			Long-dated inflation volatilities	0% to 2%	1	%
Total net derivative assets	$(1,313)					

(1) 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 115: Trading account assets – Corporate securities, trading loans and other of $2.8 billion, Trading account assets – Non-U.S. sovereign debt of $510 million, Trading account assets – Mortgage trading loans, ABS and other MBS of $1.2 billion, AFS debt securities – Other taxable securities of $594 million, AFS debt securities – Tax-exempt securities of $542 million, Loans and leases of $720 million and LHFS of $656 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.

(4) The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions.

CPR = Constant Prepayment Rate
CDR = Constant Default Rate
EBITDA = Earnings before interest, taxes, depreciation and amortization
MMBtu = Million British thermal units
IR = Interest Rate
FX = Foreign Exchange
n/a = not applicable

In the previous tables, 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 results in certain ranges of inputs being wide and unevenly distributed across asset and liability categories.

Sensitivity of Fair Value Measurements to Changes in Unobservable Inputs

Loans and Securities

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. A significant increase in price would result in a significantly higher fair value for long positions and short positions would be impacted in a directionally opposite way.

Mortgage Servicing Rights

The weighted-average lives and fair value of MSRs are sensitive to changes in modeled assumptions. The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions. The weighted-average life represents the average period of time that the MSRs' 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. For example, a 10 percent or 20 percent decrease in prepayment rates, which impact the weighted-average life, could result in an increase in fair value of $88 million or $183 million, while a 10 percent or 20 percent increase in prepayment rates could result in a decrease in fair value of $81 million or $156 million. A 100 bp or 200 bp decrease in option-adjusted spread (OAS) levels could result in an increase in fair value of $74 million or $154 million, while a 100 bp or 200 bp increase in OAS levels could result in a decrease in

fair value of $69 million or $135 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. The Corporation manages the risk in 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 on the Consolidated Balance Sheet.

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.

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 (i.e., 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 depend 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.

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, 2017 and 2016.

Assets Measured at Fair Value on a Nonrecurring Basis

	September 30, 2017		Three Months Ended September 30, 2017	Nine Months Ended September 30, 2017
(Dollars in millions)	Level 2	Level 3	Gains (Losses)	
Assets				
Loans held-for-sale	$ 70	$ 16	$—	$ (4)
Loans and leases [1]	—	813	(152)	(307)
Foreclosed properties [2, 3]	—	79	(21)	(35)
Other assets	353	—	(1)	(121)

	September 30, 2016		Three Months Ended September 30, 2016	Nine Months Ended September 30, 2016
Assets				
Loans held-for-sale	$ 191	$ 48	$(1)	$ (44)
Loans and leases [1]	—	1,333	(143)	(399)
Foreclosed properties [2, 3]	—	113	(23)	(41)
Other assets	173	—	(18)	(44)

(1) Includes $71 million and $132 million of losses on loans that were written down to a collateral value of zero during the three and nine months ended September 30, 2017, compared to losses of $48 million and $112 million for the same periods in 2016.

(2) 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. Losses on foreclosed properties include losses taken during the first 90 days after transfer of a loan to foreclosed properties.

(3) Excludes $879 million and $1.3 billion of properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans) at September 30, 2017 and 2016.

The table below presents information about significant unobservable inputs related to the Corporation's nonrecurring Level 3 financial assets and liabilities at September 30, 2017 and December 31, 2016. Loans and leases 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, 2017
(Dollars in millions)	Inputs

Financial Instrument	Fair Value	Valuation Technique	Significant Unobservable Inputs	Ranges of Inputs	Weighted Average
Loans and leases backed by residential real estate assets	$813	Market comparables	OREO discount	8% to 54%	21 %
			Costs to sell	7% to 45%	9 %
	December 31, 2016				
Loans and leases backed by residential real estate assets	$ 1,416	Market comparables	OREO discount	8% to 56%	21 %
			Costs to sell	7% to 45%	9 %

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 2016 Annual Report on Form 10-K.

The following tables provide 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, 2017 and December 31, 2016, and 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, 2017 and 2016.

Fair Value Option Elections

(Dollars in millions)	September 30, 2017 Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal	December 31, 2016 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	$56,780	$ 56,720	$ 60	$49,750	$ 49,615	$ 135
Loans reported as trading account assets [1]	5,734	10,749	(5,015)	6,215	11,557	(5,342)
Trading inventory – other	11,096	n/a	n/a	8,206	n/a	n/a
Consumer and commercial loans	6,285	6,332	(47)	7,085	7,190	(105)
Loans held-for-sale	3,128	4,751	(1,623)	4,026	5,595	(1,569)
Customer receivables and other assets	233	230	3	253	250	3
Long-term deposits	468	433	35	731	672	59
Federal funds purchased and securities loaned or sold under agreements to repurchase	38,852	38,861	(9)	35,766	35,929	(163)
Short-term borrowings	1,904	1,904	—	2,024	2,024	—
Unfunded loan commitments	101	n/a	n/a	173	n/a	n/a
Long-term debt [2]	29,897	30,497	(600)	30,037	29,862	175

(1) A significant portion of the loans reported as trading account assets are distressed loans which trade and were purchased at a deep discount to par, and the remainder are loans with a fair value near contractual principal outstanding.

(2) Includes structured liabilities with a fair value of $29.5 billion and $29.7 billion, and contractual principal outstanding of $30.1 billion and $29.5 billion at September 30, 2017 and December 31, 2016.

n/a = not applicable

Gains (Losses) Relating to Assets and Liabilities Accounted for Under the Fair Value Option

(Dollars in millions)	Three Months Ended September 30, 2017 Trading Account Profits	Mortgage Banking Income (Loss)	Other Income	Total
Loans reported as trading account assets	$75	$ —	$ —	$75
Trading inventory – other [1]	1,217	—	—	1,217
Loans held-for-sale [2]	—	73	19	92
Unfunded loan commitments	—	—	21	21
Long-term debt [3, 4]	(416)	—	(38)	(454)
Other [5]	3	—	(3)	—
Total	$879	$ 73	$ (1)	$951

Three Months Ended September 30, 2016

Loans reported as trading account assets	$125	$ —	$ —	$125
Trading inventory – other[1]	907	—	—	907
Loans held-for-sale [2]	5	132	2	139
Unfunded loan commitments	—	—	133	133
Long-term debt [3, 4]	(138)	—	(24)	(162)
Other [5]	(32)	—	40	8
Total	$867	$ 132	$ 151	$1,150

	Nine Months Ended September 30, 2017			
Loans reported as trading account assets	$272	$—	$—	$272
Trading inventory – other[1]	2,890	—	—	2,890
Loans held-for-sale [2]	—	182	93	275
Unfunded loan commitments	—	—	55	55
Long-term debt [3, 4]	(471)	—	(109)	(580)
Other [5]	(41)	—	44	3
Total	$2,650	$182	$83	$2,915

	Nine Months Ended September 30, 2016			
Loans reported as trading account assets	$251	$—	$—	$251
Trading inventory – other[1]	551	—	—	551
Loans held-for-sale [2]	10	493	57	560
Unfunded loan commitments	—	—	444	444
Long-term debt [3, 4]	(718)	—	(77)	(795)
Other [5]	(7)	—	(14)	(21)
Total	$87	$493	$410	$990

(1) The gains (losses) in trading account profits 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.

(3) 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.

(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 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 2016 Annual Report on Form 10-K.

(5) Includes gains (losses) on federal funds sold and securities borrowed or purchased under agreements to resell, consumer and commercial loans, other assets, short-term borrowings, long-term deposits, and federal funds purchased and securities loaned or sold under agreements to repurchase.

Gains (Losses) Related to Borrower-specific Credit Risk for
Assets Accounted for Under the Fair Value Option

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2017	2016	2017	2016
Loans reported as trading account assets	$ 5	$ —	$ 25	$ 5
Consumer and commercial loans	(10)	14	31	(25