
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q**

(Mark One)

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

For the Quarterly Period Ended March 31, 2019

or

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

For the transition period from to

Commission file number:

1-6523

Exact name of registrant as specified in its charter:

Bank of America Corporation

State or other jurisdiction of incorporation or organization:

Delaware

IRS Employer Identification No.:

56-0906609

Address of principal executive offices:

Bank of America Corporate Center

100 N. Tryon Street

Charlotte, North Carolina 28255

Registrant's telephone number, including area code:

(704) 386-5681

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

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

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files).

Yes ☒ No ☐

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

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

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

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

Yes ☐ No ☒

On April 25, 2019, there were 9,508,203,218 shares of Bank of America Corporation Common Stock outstanding.

Bank of America Corporation and Subsidiaries
March 31, 2019
Form 10-Q

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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," "believes," "continue" and other similar expressions or future or conditional verbs such as "will," "may," "might," "should," "would" and "could." Forward-looking statements represent the Corporation's current expectations, plans or forecasts of its future results, revenues, expenses, efficiency ratio, capital measures, strategy 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 2018 Annual Report on Form 10-K and in any of the Corporation's subsequent Securities and Exchange Commission filings: the Corporation's potential claims, damages, penalties, fines and reputational damage resulting from pending or future litigation, regulatory proceedings and enforcement actions; the possibility that the Corporation's future liabilities may be in excess of its recorded liability and estimated range of possible loss for litigation, regulatory, and representations and warranties 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 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; the risks related to the discontinuation of the London InterBank Offered Rate and other reference rates, including increased expenses and litigation and the effectiveness of hedging strategies; 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, inflation, currency exchange rates, economic conditions, trade policies, including tariffs, and potential geopolitical instability; the impact of the interest

rate environment on the Corporation's business, financial condition and results of operations; 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 Corporation's ability to achieve its expense targets and expectations regarding net interest income, net charge-offs, effective tax rate, loan growth or other projections; adverse changes to the Corporation's credit ratings from the major credit rating agencies; an inability to access capital markets or maintain deposits; estimates of the fair value and other accounting values, subject to impairment assessments, of certain of the Corporation's assets and liabilities, including the Corporation's merchant services joint venture; the estimated or actual impact of changes in accounting standards or assumptions in applying those standards, including the new credit loss accounting standard; uncertainty regarding the content, timing and impact of regulatory capital and liquidity requirements; the impact of adverse changes to total loss-absorbing capacity requirements and/or global systemically important bank surcharges; the success of our reorganization of Merrill Lynch, Pierce, Fenner & Smith Incorporated, which is expected to occur in the second quarter of 2019; the potential impact of actions of the Board of Governors of the Federal Reserve System on the Corporation's capital plans; the effect of regulations, other guidance or additional information on the impact from the Tax Cuts and Jobs Act; 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; the impact of a federal government shutdown and uncertainty regarding the federal government's debt limit; 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 (GWM)*, *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 March 31, 2019, the Corporation had \$2.4 trillion in assets and a headcount of approximately 205,000 employees.

As of March 31, 2019, we served clients through operations across the U.S., its territories and approximately 35 countries. Our retail banking footprint covers approximately 86 percent of the U.S. population, and we serve approximately 66 million consumer and small business clients with approximately 4,400 retail financial centers, approximately 16,400 ATMs, and leading digital banking platforms (www.bankofamerica.com) with more than 37 million active users, including over 27 million active mobile users. We offer industry-leading support to approximately three million small business owners. Our wealth management businesses, with client balances of \$2.8 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.

Recent Developments

Capital Management

During the first quarter of 2019, we repurchased \$6.3 billion of common stock pursuant to the Board of Directors’ (the Board) repurchase authorizations. For additional information, see Capital Management on page 16.

U.K. Exit from the EU

A referendum held in the U.K. in 2016 resulted in a majority vote in favor of exiting the European Union (EU). In March 2017, the U.K. notified the EU of its intention to withdraw from the EU. In April 2019, the deadline for the U.K.’s withdrawal from the EU was extended to October 31, 2019. The U.K.’s withdrawal could occur

sooner if the U.K. passes a withdrawal agreement prior to the deadline. Negotiations between the U.K. and the EU regarding the terms and conditions of the withdrawal are ongoing.

We conduct business in Europe, the Middle East and Africa primarily through our subsidiaries in the U.K., Ireland and France. In connection with the U.K.’s intention to withdraw from the EU, we have implemented the following changes to how we operate in the region, including establishing a bank and broker-dealer in the EU.

- Bank of America Merrill Lynch International Designated Activity Company (BAMLI DAC), our main banking entity in Ireland, was established in late 2018 through the merger of two entities. BAMLI DAC provides banking services in the European Economic Area, the Middle East and Africa directly and through its branch network. Reliance on the EU’s cross-border merger directive enabled BAMLI DAC to migrate client positions, with decreased legal complexity and operational risk.
- BofA Securities Europe SA (BofASE), a newly formed investment firm in France, was set up to deliver investment services in the European Economic Area excluding the U.K. and is now operational.
- Merrill Lynch International (MLI) continues to be our primary investment firm in the U.K.
- BANA, including its London branch, continues to conduct operations in the EU and the U.K.

These changes will enable us to continue to service our clients with minimal disruption, retain operational flexibility, minimize transition risks and maximize legal entity efficiencies, independent of the ultimate outcome and timing of the withdrawal.

To facilitate client readiness and mitigate operational risk, BofASE and BAMLI DAC continue to execute internal and client-related testing activities across product and business lines. Migration of client activity to BofASE and BAMLI DAC began in February and March 2019, respectively. While we have taken measures to minimize operational disruption and prepare for various potential outcomes of the U.K.’s withdrawal from the EU, the preparedness of our counterparties and the relevant financial markets infrastructure remain outside our control. The global economic impact of the U.K.’s withdrawal from the EU remains uncertain and could result in regional and global financial market disruptions. In preparation for the withdrawal, we will continue to assess potential risks, including operational, regulatory and legal risks.

Financial Highlights

Effective January 1, 2019, we made certain financial reporting changes and reclassifications, which were adopted on a retrospective basis. The changes and reclassifications reflect changes to both the format of the Consolidated Statement of Income and segment allocations. For additional information, see the Corporation’s Current Report on Form 8-K filed with the Securities and Exchange Commission (SEC) on April 1, 2019.

Table 1 Summary Income Statement and Selected Financial Data

	Three Months Ended March 31	
	2019	2018
(Dollars in millions, except per share information)		
Income statement		
Net interest income	\$ 12,375	\$ 11,769
Noninterest income	10,629	11,301
Total revenue, net of interest expense	23,004	23,070
Provision for credit losses	1,013	834
Noninterest expense	13,224	13,842
Income before income taxes	8,767	8,394
Income tax expense	1,456	1,476
Net income	7,311	6,918
Preferred stock dividends	442	428
Net income applicable to common shareholders	\$ 6,869	\$ 6,490
Per common share information		
Earnings	\$ 0.71	\$ 0.63
Diluted earnings	0.70	0.62
Dividends paid	0.15	0.12
Performance ratios		
Return on average assets	1.26%	1.21%
Return on average common shareholders' equity	11.42	10.85
Return on average tangible common shareholders' equity (1)	16.01	15.26
Efficiency ratio	57.48	60.00

	March 31	
	2019	December 31 2018
Balance sheet		
Total loans and leases	\$ 945,615	\$ 946,895
Total assets	2,377,164	2,354,507
Total deposits	1,379,337	1,381,476
Total common shareholders' equity	244,684	242,999
Total shareholders' equity	267,010	265,325

(1) Return on average tangible common shareholders' equity is a non-GAAP financial measure. For more 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 42.

Net income was \$7.3 billion, or \$0.70 per diluted share, for the three months ended March 31, 2019 compared to \$6.9 billion, or \$0.62 per diluted share, for the same period in 2018. The improvement in net income was driven by an increase in net interest income and a decline in noninterest expense, partially offset by lower noninterest income and an increase in the provision for credit losses.

Total assets increased \$22.7 billion from December 31, 2018 to \$2.4 trillion primarily driven by higher trading account assets due to increased client balances in the Equities businesses in *Global Markets* and an increase in other assets as a result of the implementation of the new lease accounting standards. These increases were partially offset by a decrease in customer and other receivables due to client activity in *Global Markets*.

Total liabilities increased \$21.0 billion from December 31, 2018 to \$2.1 trillion primarily driven by higher trading account liabilities due to increased client activity in *Global Markets* and an increase in other liabilities due to the implementation of the new lease accounting standards, partially offset by a decrease in short-term borrowings due to lower funding needs as a result of deposit growth. Shareholders' equity increased \$1.7 billion from December 31, 2018 primarily due to net income and market value increases on debt securities partially offset by returns of capital to shareholders through common stock repurchases and common and preferred stock dividends.

Net Interest Income

Net interest income increased \$606 million to \$12.4 billion for the three months ended March 31, 2019 compared to the same period in 2018. Net interest yield on a fully taxable-equivalent (FTE) basis increased 9 basis points (bps) to 2.51 percent. These increases were primarily driven by higher interest rates as well as loan and deposit growth, modestly offset by loan spread compression. We expect full-year 2019 net interest income to increase by approximately three percent compared to full-year 2018 assuming the interest rate forward curve as of April 16, 2019 when the first quarter results were announced, and loan and deposit growth consistent with the current economic outlook. For more information on net interest yield and the FTE basis, see Supplemental Financial Data on page 5, and for more information on interest rate risk management, see Interest Rate Risk Management for the Banking Book on page 39.

Noninterest Income

Table 2 Noninterest Income

	Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Fees and commissions:		
Card income	\$ 1,375	\$ 1,402
Service charges	1,839	1,921
Investment and brokerage services	3,360	3,664
Investment banking fees	1,264	1,353
Total fees and commissions	7,838	8,340
Trading account income	2,338	2,553
Other income	453	408
Total noninterest income	\$ 10,629	\$ 11,301

Noninterest income decreased \$672 million to \$10.6 billion for the three months ended March 31, 2019 compared to the same period in 2018. The following highlights the significant changes.

- Service charges decreased \$82 million primarily driven by lower treasury services-related revenue and credit fees in *Global Banking*, as well as lower overdraft fees due to policy changes and lower ATM volume in *Consumer Banking*.
- Investment and brokerage services income decreased \$304 million primarily due to lower average market valuations compared to the same period in 2018 and declines in transactional revenue and assets under management (AUM) pricing, partially offset by the positive impact of AUM flows. The decline in transactional revenue was driven by lower market volatility resulting in lower client activity.
- Investment banking fees decreased \$89 million primarily due to declines in debt and equity underwriting fees, partially offset by an increase in advisory fees.
- Trading account income decreased \$215 million primarily due to lower client activity across fixed-income, currencies and commodities (FICC) and Equities.

Provision for Credit Losses

The provision for credit losses increased \$179 million to \$1.0 billion for the three months ended March 31, 2019 compared to the same period in 2018, primarily driven by a single-name utility client charge-off in the current-year period and energy reserve releases in commercial in the prior-year period, a slower pace of portfolio improvement in consumer real estate, and portfolio seasoning in the U.S. credit card portfolio. For more information on the provision for credit losses, see Provision for Credit Losses on page 35.

Noninterest Expense

Table 3 Noninterest Expense

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Compensation and benefits	\$ 8,249	\$ 8,480
Occupancy and equipment	1,605	1,607
Information processing and communications	1,164	1,165
Product delivery and transaction related	662	756
Marketing	442	345
Professional fees	360	381
Other general operating	742	1,108
Total noninterest expense	\$ 13,224	\$ 13,842

Noninterest expense decreased \$618 million to \$13.2 billion for the three months ended March 31, 2019 compared to the same period in 2018. The decrease was primarily due to efficiency savings, lower Federal Deposit Insurance Corporation (FDIC) expense and lower amortization of intangibles, partially offset by increased investments in the businesses.

Income Tax Expense

Table 4 Income Tax Expense

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Income before income taxes	\$ 8,767	\$ 8,394
Income tax expense	1,456	1,476
Effective tax rate	16.6%	17.6%

The effective tax rates for the three months ended March 31, 2019 and 2018 were primarily driven by our recurring tax preference benefits and tax benefits from deductions associated with share-based compensation. We expect the effective tax rate for 2019 to be approximately 19 percent, absent unusual items.

Supplemental Financial Data

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

We view net interest income and related ratios and analyses on an 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 21 percent and a representative state tax rate. Net interest yield, which measures the basis points we earn over the cost of funds, utilizes net interest income (and thus total revenue) on an FTE basis. 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) gains (losses)) which result in non-GAAP financial measures. We believe that the presentation of measures that exclude these items is useful because such measures 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 intangible assets (excluding mortgage servicing rights (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 net income applicable to common shareholders as a percentage of adjusted average common shareholders' equity. The tangible common equity ratio represents adjusted ending common shareholders' equity divided by total assets less goodwill and intangible assets (excluding MSRs), net of related deferred tax liabilities.
- Return on average tangible shareholders' equity measures our net income applicable to common shareholders 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 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 common 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 5 and 6.

For more information on the reconciliation of these non-GAAP financial measures to the corresponding GAAP financial measures, see Non-GAAP Reconciliations on page 42.

Table 5 Selected Quarterly Financial Data

	2019 Quarter		2018 Quarters				
	First	Fourth	Third	Second	First		
(In millions, except per share information)							
Income statement							
Net interest income	\$ 12,375	\$ 12,504	\$ 12,061	\$ 11,828	\$ 11,769		
Noninterest income	10,629	10,173	10,663	10,721	11,301		
Total revenue, net of interest expense	23,004	22,677	22,724	22,549	23,070		
Provision for credit losses	1,013	905	716	827	834		
Noninterest expense	13,224	13,074	13,014	13,224	13,842		
Income before income taxes	8,767	8,698	8,994	8,498	8,394		
Income tax expense	1,456	1,420	1,827	1,714	1,476		
Net income	7,311	7,278	7,167	6,784	6,918		
Net income applicable to common shareholders	6,869	7,039	6,701	6,466	6,490		
Average common shares issued and outstanding	9,725.9	9,855.8	10,031.6	10,181.7	10,322.4		
Average diluted common shares issued and outstanding	9,787.3	9,996.0	10,170.8	10,309.4	10,472.7		
Performance ratios							
Return on average assets	1.26%	1.24%	1.23%	1.17%	1.21%		
Four-quarter trailing return on average assets ⁽¹⁾	1.22	1.21	1.00	0.93	0.86		
Return on average common shareholders' equity	11.42	11.57	10.99	10.75	10.85		
Return on average tangible common shareholders' equity ⁽²⁾	16.01	16.29	15.48	15.15	15.26		
Return on average shareholders' equity	11.14	10.95	10.74	10.26	10.57		
Return on average tangible shareholders' equity ⁽²⁾	15.10	14.90	14.61	13.95	14.37		
Total ending equity to total ending assets	11.23	11.27	11.21	11.53	11.43		
Total average equity to total average assets	11.28	11.30	11.42	11.42	11.41		
Dividend payout	21.20	20.90	22.35	18.83	19.06		
Per common share data							
Earnings	\$ 0.71	\$ 0.71	\$ 0.67	\$ 0.64	\$ 0.63		
Diluted earnings	0.70	0.70	0.66	0.63	0.62		
Dividends paid	0.15	0.15	0.15	0.12	0.12		
Book value	25.57	25.13	24.33	24.07	23.74		
Tangible book value ⁽²⁾	18.26	17.91	17.23	17.07	16.84		
Market capitalization							
	\$ 263,992	\$ 238,251	\$ 290,424	\$ 282,259	\$ 305,176		
Average balance sheet							
Total loans and leases	\$ 944,020	\$ 934,721	\$ 930,736	\$ 934,818	\$ 931,915		
Total assets	2,360,992	2,334,586	2,317,829	2,322,678	2,325,878		
Total deposits	1,359,864	1,344,951	1,316,345	1,300,659	1,297,268		
Long-term debt	196,726	201,056	203,239	199,448	197,787		
Common shareholders' equity	243,891	241,372	241,812	241,313	242,713		
Total shareholders' equity	266,217	263,698	264,653	265,181	265,480		
Asset quality							
Allowance for credit losses ⁽³⁾	\$ 10,379	\$ 10,398	\$ 10,526	\$ 10,837	\$ 11,042		
Nonperforming loans, leases and foreclosed properties ⁽⁴⁾	5,145	5,244	5,449	6,181	6,694		
Allowance for loan and lease losses as a percentage of total loans and leases outstanding ⁽⁴⁾	1.02%	1.02%	1.05%	1.08%	1.11%		
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases ⁽⁴⁾	197	194	189	170	161		
Net charge-offs	\$ 991	\$ 924	\$ 932	\$ 996	\$ 911		
Annualized net charge-offs as a percentage of average loans and leases outstanding ⁽⁴⁾	0.43%	0.39%	0.40%	0.43%	0.40%		
Capital ratios at period end ⁽⁵⁾							
Common equity tier 1 capital	11.6%	11.6%	11.4%	11.4%	11.3%		
Tier 1 capital	13.1	13.2	12.9	13.0	13.0		
Total capital	15.2	15.1	14.7	14.8	14.8		
Tier 1 leverage	8.4	8.4	8.3	8.4	8.4		
Supplementary leverage ratio	6.8	6.8	6.7	6.7	6.8		
Tangible equity ⁽²⁾	8.5	8.6	8.5	8.7	8.7		
Tangible common equity ⁽²⁾	7.6	7.6	7.5	7.7	7.6		
Total loss-absorbing capacity and long-term debt metrics ⁽⁶⁾							
Total loss-absorbing capacity to risk-weighted assets	24.8%						

Total loss-absorbing capacity to supplementary leverage exposure	12.8
Eligible long-term debt to risk-weighted assets	11.4
Eligible long-term debt to supplementary leverage exposure	5.9

(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, see Supplemental Financial Data on page 5 and for corresponding reconciliations to GAAP financial measures, see Non-GAAP Reconciliations on page 42.

(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 28 and corresponding Table 26 and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 31 and corresponding Table 33.

(5) For additional information, including which approach is used to assess capital adequacy, see Capital Management on page 16.

(6) Effective January 1, 2019, the Corporation became subject to minimum total loss-absorbing capacity and long-term debt requirements. For more information, see Capital Management on page 16.

Table 6 Quarterly Average Balances and Interest Rates - FTE Basis

	First Quarter 2019			First Quarter 2018		
	Average Balance	Interest Income/Expense	Yield/Rate	Average Balance	Interest Income/Expense	Yield/Rate
(Dollars in millions)						
Earning assets						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$ 134,962	\$ 506	1.52%	\$ 140,247	\$ 422	1.22%
Time deposits placed and other short-term investments	8,453	59	2.82	10,786	61	2.31
Federal funds sold and securities borrowed or purchased under agreements to resell	274,308	1,195	1.77	248,320	622	1.02
Trading account assets	140,228	1,341	3.87	131,123	1,147	3.54
Debt securities	441,680	3,148	2.83	433,096	2,830	2.58
Loans and leases (1):						
Residential mortgage	210,174	1,862	3.55	204,830	1,782	3.48
Home equity	47,690	593	5.03	56,952	643	4.56
U.S. credit card	95,008	2,530	10.80	94,423	2,313	9.93
Direct/Indirect and other consumer (2)	90,430	821	3.69	95,292	728	3.10
Total consumer	443,302	5,806	5.29	451,497	5,466	4.89
U.S. commercial	316,089	3,349	4.29	299,850	2,717	3.68
Non-U.S. commercial	101,996	886	3.52	99,504	738	3.01
Commercial real estate (3)	60,859	702	4.68	59,231	587	4.02
Commercial lease financing	21,774	196	3.60	21,833	175	3.20
Total commercial	500,718	5,133	4.15	480,418	4,217	3.56
Total loans and leases	944,020	10,939	4.69	931,915	9,683	4.20
Other earning assets	67,667	1,135	6.80	84,345	984	4.72
Total earning assets (4)	2,011,318	18,323	3.68	1,979,832	15,749	3.21
Cash and due from banks	25,824			26,275		
Other assets, less allowance for loan and lease losses	323,850			319,771		
Total assets	\$ 2,360,992			\$ 2,325,878		
Interest-bearing liabilities						
U.S. interest-bearing deposits:						
Savings	\$ 53,573	\$ 1	0.01%	\$ 54,747	\$ 1	0.01%
NOW and money market deposit accounts	731,025	1,157	0.64	659,033	406	0.25
Consumer CDs and IRAs	41,791	74	0.72	41,313	33	0.33
Negotiable CDs, public funds and other deposits	65,974	367	2.25	40,639	157	1.56
Total U.S. interest-bearing deposits	892,363	1,599	0.73	795,732	597	0.30
Non-U.S. interest-bearing deposits:						
Banks located in non-U.S. countries	2,387	6	1.02	2,243	9	1.67
Governments and official institutions	178	—	0.11	1,154	—	0.02
Time, savings and other	64,212	190	1.20	67,334	154	0.92
Total non-U.S. interest-bearing deposits	66,777	196	1.19	70,731	163	0.93
Total interest-bearing deposits	959,140	1,795	0.76	866,463	760	0.36
Federal funds purchased, securities loaned or sold under agreements to repurchase, short-term borrowings and other interest-bearing liabilities	265,163	1,852	2.83	279,801	1,135	1.64
Trading account liabilities	45,593	345	3.07	55,362	357	2.62
Long-term debt	196,726	1,803	3.69	197,787	1,578	3.22
Total interest-bearing liabilities (4)	1,466,622	5,795	1.60	1,399,413	3,830	1.11
Noninterest-bearing sources:						
Noninterest-bearing deposits	400,724			430,805		
Other liabilities (5)	227,429			230,180		
Shareholders' equity	266,217			265,480		
Total liabilities and shareholders' equity	\$ 2,360,992			\$ 2,325,878		
Net interest spread			2.08%			2.10%
Impact of noninterest-bearing sources			0.43			0.32
Net interest income/yield on earning assets (6)		\$ 12,528	2.51%		\$ 11,919	2.42%

(1) Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is generally recognized on a cost recovery basis.

(2) Includes non-U.S. consumer loans of \$2.8 billion and \$2.9 billion in the first quarter of 2019 and 2018.

(3) Includes U.S. commercial real estate loans of \$56.4 billion and \$55.3 billion, and non-U.S. commercial real estate loans of \$4.5 billion and \$3.9 billion in the first quarter of 2019 and 2018.

(4) Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by \$73 million and \$7 million in the first quarter of 2019 and 2018. Interest expense includes the impact of interest rate risk management contracts, which increased (decreased) interest expense on the underlying liabilities by \$50 million and \$(204) million in the first quarter of 2019 and 2018. For more information, see Interest Rate Risk Management for the Banking Book on page 39.

(5) Includes \$31.4 billion and \$31.9 billion of structured notes and liabilities for the first quarter of 2019 and 2018.

(6) Net interest income includes FTE adjustments of \$153 million and \$150 million for the first quarter of 2019 and 2018.

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 manage our segments and report their results on an FTE basis. 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 16. The capital allocated to the business segments is referred to as allocated capital. Allocated equity in the reporting units is comprised of allocated capital plus capital for the portion of goodwill and intangibles specifically assigned to the reporting unit. For more information, see *Note 8 – Goodwill and Intangible Assets* to the Consolidated Financial Statements.

For more information on our presentation of financial information on an FTE basis, see *Supplemental Financial Data* on page 5, and reconciliations to consolidated total revenue, net income and period-end total assets, see *Note 18 – Business Segment Information* to the Consolidated Financial Statements.

Consumer Banking

	Deposits		Consumer Lending		Total Consumer Banking		
	Three Months Ended March 31						
(Dollars in millions)	2019	2018	2019	2018	2019	2018	%Change
Net interest income	\$ 4,307	\$ 3,712	\$ 2,799	\$ 2,765	\$ 7,106	\$ 6,477	10%
Noninterest income:							
Card income	(7)	(7)	1,204	1,241	1,197	1,234	(3)
Service charges	1,020	1,044	—	—	1,020	1,044	(2)
All other income	232	130	77	95	309	225	37
Total noninterest income	1,245	1,167	1,281	1,336	2,526	2,503	1
Total revenue, net of interest expense	5,552	4,879	4,080	4,101	9,632	8,980	7
Provision for credit losses	46	41	928	894	974	935	4
Noninterest expense	2,640	2,720	1,719	1,828	4,359	4,548	(4)
Income before income taxes	2,866	2,118	1,433	1,379	4,299	3,497	23
Income tax expense	702	541	351	352	1,053	893	18
Net income	\$ 2,164	\$ 1,577	\$ 1,082	\$ 1,027	\$ 3,246	\$ 2,604	25
Effective tax rate (1)					24.5%	25.5%	
Net interest yield	2.52%	2.23%	3.95%	4.08%	3.96	3.71	
Return on average allocated capital	73	53	18	17	36	29	
Efficiency ratio	47.54	55.75	42.12	44.57	45.24	50.64	

Balance Sheet

	Three Months Ended March 31						%Change
	2019	2018	2019	2018	2019	2018	
	2019	2018	2019	2018	2019	2018	
Average							
Total loans and leases	\$ 5,313	\$ 5,170	\$ 286,956	\$ 274,387	\$ 292,269	\$ 279,557	5%
Total earning assets (2)	693,051	673,633	287,259	274,748	727,350	707,746	3
Total assets (2)	724,493	701,418	297,729	285,864	769,262	746,647	3
Total deposits	692,172	668,983	4,767	5,368	696,939	674,351	3
Allocated capital	12,000	12,000	25,000	25,000	37,000	37,000	—
Period end	March 31	December 31	March 31	December 31	March 31	December 31	%Change
	2019	2018	2019	2018	2019	2018	
Total loans and leases	\$ 5,283	\$ 5,470	\$ 287,171	\$ 288,865	\$ 292,454	\$ 294,335	(1)%
Total earning assets (2)	717,753	694,672	287,661	289,249	752,620	728,813	3
Total assets (2)	748,742	724,019	298,562	299,970	794,510	768,881	3
Total deposits	716,345	691,666	5,382	4,480	721,727	696,146	4

(1) Estimated at the segment level only.

(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*.

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. Deposits and Consumer Lending include the net impact of migrating customers and their related deposit, loan and investment asset balances between Deposits, Consumer Lending and *GWIM*, as well as other client-managed businesses. For more information about *Consumer Banking*, including our Deposits and Consumer Lending businesses, see Business Segment

Operations in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Consumer Banking Results

Net income for *Consumer Banking* increased \$642 million to \$3.2 billion for the three months ended March 31, 2019 compared to the same period in 2018 primarily driven by higher net interest income and lower noninterest expense. Net interest income increased \$629 million to \$7.1 billion primarily due to the beneficial impact of an increase in investable assets as a result

of higher interest rates, as well as an increase in deposits, pricing discipline and loan growth. Noninterest income of \$2.5 billion remained relatively unchanged.

The provision for credit losses increased \$39 million to \$974 million due to portfolio seasoning in the U.S. credit card portfolio. Noninterest expense decreased \$189 million to \$4.4 billion primarily driven by lower FDIC expense and operating efficiencies. These decreases were partially offset by investments in digital capabilities and business growth combined with investments in new financial centers and renovations.

The return on average allocated capital was 36 percent, up from 29 percent, driven by higher net income. For additional information on capital allocations, see Business Segment Operations on page 8.

Deposits

Net income for Deposits increased \$587 million to \$2.2 billion for the three months ended March 31, 2019 compared to the same period in 2018 driven by higher revenue and lower noninterest expense. Net interest income increased \$595 million to \$4.3 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits, and pricing discipline. Noninterest income increased \$78 million to \$1.2 billion primarily driven by results from asset and liability management (ALM) activities, partially offset by lower service charges.

The provision for credit losses increased \$5 million to \$46 million. Noninterest expense decreased \$80 million to \$2.6 billion primarily driven by lower FDIC expense and operating efficiencies. These decreases were partially offset by investments in digital capabilities and business growth combined with investments in new financial centers and renovations.

Average deposits increased \$23.2 billion to \$692.2 billion driven by strong organic growth. Growth in checking and money market savings of \$27.0 billion was partially offset by a decline in time deposits and traditional savings of \$3.6 billion.

Key Statistics – Deposits

	Three Months Ended March 31	
	2019	2018
Total deposit spreads (excludes noninterest costs) ⁽¹⁾	2.38%	2.00%

Period end			
Consumer investment assets (in millions) ⁽²⁾	\$	210,930	\$ 182,110
Active digital banking users (units in thousands) ⁽³⁾		37,034	35,518
Active mobile banking users (units in thousands)		27,127	24,801
Financial centers		4,353	4,452
ATMs		16,378	16,011

⁽¹⁾ Includes deposits held in Consumer Lending.

⁽²⁾ Includes client brokerage assets, certain deposit sweep balances and ALM in Consumer Banking.

⁽³⁾ Active digital banking users represents mobile and online users.

Consumer investment assets increased \$28.8 billion driven by strong client flows and market performance. Active mobile banking users increased 2.3 million reflecting continuing changes in our customers' banking preferences. The number of financial centers declined by a net 99 reflecting 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

Net income for Consumer Lending increased \$55 million to \$1.1 billion for the three months ended March 31, 2019 compared to the same period in 2018 driven by lower noninterest expense and modestly higher net interest income, partially offset by lower noninterest income. Net interest income increased \$34 million to \$2.8 billion primarily driven by higher interest rates and the impact of an increase in loan balances. Noninterest income decreased \$55 million to \$1.3 billion driven by lower card income and lower mortgage banking income.

The provision for credit losses increased \$34 million to \$928 million driven by portfolio seasoning in the U.S. credit card portfolio. Noninterest expense decreased \$109 million to \$1.7 billion primarily driven by operating efficiencies.

Average loans increased \$12.6 billion to \$287.0 billion primarily driven by increases in residential mortgages and U.S. credit card, partially offset by lower home equity and consumer vehicle loans.

Key Statistics – Consumer Lending

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Total U.S. credit card ⁽¹⁾		
Gross interest yield	10.80%	9.93%
Risk-adjusted margin	8.03	8.22
New accounts (in thousands)	1,034	1,194
Purchase volumes	\$ 62,751	\$ 61,347
Debit card purchase volumes	\$ 78,494	\$ 76,052

⁽¹⁾ In addition to the U.S. credit card portfolio in Consumer Banking, the remaining U.S. credit card portfolio is in GWM.

During the three months ended March 31, 2019, total U.S. credit card risk-adjusted margin decreased 19 bps, primarily driven by increased net charge-offs and higher credit card rewards costs. Total U.S. credit card purchase volumes increased \$1.4 billion to \$62.8 billion, and debit card purchase volumes increased \$2.4 billion to \$78.5 billion, reflecting higher levels of consumer spending.

Key Statistics – Loan Production ⁽¹⁾

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Total ⁽²⁾:		
First mortgage	\$ 11,460	\$ 9,424
Home equity	2,825	3,749
Consumer Banking:		
First mortgage	\$ 8,155	\$ 5,964
Home equity	2,485	3,345

⁽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 GWM.

First mortgage loan originations in Consumer Banking and for the total Corporation increased \$2.2 billion and \$2.0 billion for the three months ended March 31, 2019 compared to the same period in 2018 primarily driven by a lower interest rate environment driving higher first-lien mortgage refinances.

Home equity production in Consumer Banking and for the total Corporation decreased \$860 million and \$924 million, primarily driven by lower demand.

Global Wealth & Investment Management

	Three Months Ended March 31		
	2019	2018	% Change
(Dollars in millions)			
Net interest income	\$ 1,684	\$ 1,584	6%
Noninterest income:			
Investment and brokerage services	2,842	3,040	(7)
All other income	294	232	27
Total noninterest income	3,136	3,272	(4)
Total revenue, net of interest expense	4,820	4,856	(1)
Provision for credit losses	5	38	(87)
Noninterest expense	3,426	3,580	(4)
Income before income taxes	1,389	1,238	12
Income tax expense	340	316	8
Net income	\$ 1,049	\$ 922	14
Effective tax rate	24.5%	25.5%	
Net interest yield	2.40	2.44	
Return on average allocated capital	29	26	
Efficiency ratio	71.07	73.74	

Balance Sheet			
	Three Months Ended March 31		
	2019	2018	% Change
Average			
Total loans and leases	\$ 164,403	\$ 159,095	3%
Total earning assets	285,033	262,776	8
Total assets	297,123	279,716	6
Total deposits	261,831	243,077	8
Allocated capital	14,500	14,500	—
	Period end		
	March 31 2019	December 31 2018	% Change
Total loans and leases	\$ 164,483	\$ 164,854	—%
Total earning assets	284,470	287,199	(1)
Total assets	296,785	305,907	(3)
Total deposits	261,168	268,700	(3)

GWIM consists of two primary businesses: Merrill Lynch Global Wealth Management (MLGWM) and Bank of America Private Bank (previously known as U.S. Trust). For more information about GWIM, see Business Segment Operations in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Net income for GWIM increased \$127 million to \$1.0 billion for the three months ended March 31, 2019 compared to the same period in 2018 due to higher net interest income and lower noninterest expense, partially offset by lower noninterest income. The operating margin was 29 percent compared to 25 percent a year ago.

Net interest income increased \$100 million to \$1.7 billion due to higher deposit spreads, and increases in average deposit and loan balances, partially offset by lower loan spreads.

Noninterest income, which primarily includes investment and brokerage services income, decreased \$136 million to \$3.1 billion. The decrease was driven by lower average market valuations compared to the same period in 2018 and declines in transactional revenue and AUM pricing, partially offset by the

positive impact of AUM flows. The decline in transactional revenue was driven by lower market volatility resulting in lower client activity.

Noninterest expense decreased \$154 million to \$3.4 billion primarily driven by lower amortization of intangibles, revenue-related incentives and FDIC expense combined with continued expense discipline, partially offset by investments in business growth.

The return on average allocated capital was 29 percent, up from 26 percent, due to higher net income. For more information on capital allocated to the business segments, see Business Segment Operations on page 8.

MLGWM revenue of \$4.0 billion decreased one percent reflecting lower asset management fees and transactional revenue, partially offset by higher net interest income. The decrease in asset management fees was driven by lower average market valuations and AUM pricing, partially offset by the impact of higher AUM flows.

Bank of America Private Bank revenue of \$855 million also decreased one percent due to lower average market valuations.

Key Indicators and Metrics

	Three Months Ended March 31	
	2019	2018
(Dollars in millions, except as noted)		
Revenue by Business		
Merrill Lynch Global Wealth Management	\$ 3,965	\$ 3,996
Bank of America Private Bank	855	860
Total revenue, net of interest expense	\$ 4,820	\$ 4,856
Client Balances by Business, at period end		
Merrill Lynch Global Wealth Management	\$ 2,384,492	\$ 2,284,803
Bank of America Private Bank	452,477	440,683
Total client balances	\$ 2,836,969	\$ 2,725,486
Client Balances by Type, at period end		
Assets under management	\$ 1,126,255	\$ 1,084,717
Brokerage and other assets	1,282,091	1,236,799
Deposits	261,168	241,531
Loans and leases (1)	167,455	162,439
Total client balances	\$ 2,836,969	\$ 2,725,486
Assets Under Management Rollforward		
Assets under management, beginning of period	\$ 1,021,221	\$ 1,080,747
Net client flows	13,473	24,240
Market valuation/other	91,561	(20,270)
Total assets under management, end of period	\$ 1,126,255	\$ 1,084,717
Associates, at period end (2)		
Number of financial advisors	17,534	17,367
Total wealth advisors, including financial advisors	19,523	19,276
Total primary sales professionals, including financial advisors and wealth advisors	20,656	20,405
Merrill Lynch Global Wealth Management Metric		
Financial advisor productivity (3) (in thousands)	\$ 1,039	\$ 1,038
Bank of America Private Bank Metric, at period end		
Primary sales professionals	1,795	1,738

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

(2) Includes financial advisors in the Consumer Banking segment of 2,773 and 2,538 at March 31, 2019 and 2018.

(3) Financial advisor productivity is defined as annualized MLGWM total revenue, excluding the allocation of certain AUM activities, divided by the total average number of financial advisors (excluding financial advisors in the Consumer Banking segment).

Client Balances

Client balances increased \$111.5 billion, or four percent, to \$2.8 trillion at March 31, 2019 compared to March 31, 2018. The increase in client balances was due to positive net flows and higher market valuations as of March 31, 2019. Positive net client flows in AUM decreased from the same period a year ago primarily due to a smaller shift from brokerage assets to AUM.

	Three Months Ended March 31		
	2019	2018	% Change
(Dollars in millions)			
Net interest income	\$ 2,790	\$ 2,679	4%
Noninterest income:			
Service charges	713	763	(7)
Investment banking fees	709	744	(5)
All other income	943	809	17
Total noninterest income	2,365	2,316	2
Total revenue, net of interest expense	5,155	4,995	3
Provision for credit losses	111	16	n/m
Noninterest expense	2,266	2,291	(1)
Income before income taxes	2,778	2,688	3
Income tax expense	750	699	7
Net income	\$ 2,028	\$ 1,989	2
Effective tax rate	27.0%	26.0%	
Net interest yield	2.98	3.00	
Return on average allocated capital	20	20	
Efficiency ratio	43.96	45.87	

Balance Sheet

	Three Months Ended March 31		
	2019	2018	% Change
Average			
Total loans and leases	\$ 370,108	\$ 351,689	5%
Total earning assets	380,308	361,822	5
Total assets	434,920	421,863	3
Total deposits	349,037	324,405	8
Allocated capital	41,000	41,000	—
Period end			
	March 31 2019	December 31 2018	% Change
Total loans and leases	\$ 373,017	\$ 365,717	2%
Total earning assets	381,490	377,812	1
Total assets	436,066	442,330	(1)
Total deposits	343,897	360,248	(5)

n/m = not meaningful

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. For more information about *Global Banking*, see Business Segment Operations in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Net income for *Global Banking* increased \$39 million to \$2.0 billion for the three months ended March 31, 2019 compared to the same period in 2018 primarily driven by higher revenue and a modest decrease in noninterest expense, partially offset by higher provision for credit losses.

Revenue increased \$160 million to \$5.2 billion for the three months ended March 31, 2019 driven by higher net interest income

and noninterest income. Net interest income increased \$111 million to \$2.8 billion primarily due to the impact of higher deposit and loan balances and increased deposit rates, partially offset by loan spread compression. Noninterest income increased \$49 million to \$2.4 billion primarily due to higher leasing-related revenue. The provision for credit losses increased \$95 million to \$111 million primarily driven by a current-period single-name utility client charge-off and energy reserve releases in the prior-year period.

Noninterest expense decreased \$25 million to \$2.3 billion, primarily due to lower FDIC expense, partially offset by continued investment in the business.

The return on average allocated capital was 20 percent for both periods. For more information on capital allocated to the business segments, see Business Segment Operations on page 8.

Global Corporate, Global Commercial and Business Banking

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

	Global Corporate Banking		Global Commercial Banking		Business Banking		Total	
	Three Months Ended March 31							
(Dollars in millions)	2019	2018	2019	2018	2019	2018	2019	2018
Revenue								
Business Lending	\$ 1,045	\$ 1,076	\$ 1,034	\$ 975	\$ 94	\$ 98	\$ 2,173	\$ 2,149
Global Transaction Services	1,007	921	891	813	266	232	2,164	1,966
Total revenue, net of interest expense	\$ 2,052	\$ 1,997	\$ 1,925	\$ 1,788	\$ 360	\$ 330	\$ 4,337	\$ 4,115
Balance Sheet								
Average								
Total loans and leases	\$ 176,288	\$ 162,073	\$ 178,450	\$ 172,360	\$ 15,343	\$ 17,259	\$ 370,081	\$ 351,692
Total deposits	168,126	155,644	142,534	132,357	38,404	36,410	349,064	324,411
Period end								
Total loans and leases	\$ 175,855	\$ 163,563	\$ 181,931	\$ 174,580	\$ 15,236	\$ 17,008	\$ 373,022	\$ 355,151
Total deposits	166,238	165,040	139,505	129,895	38,178	36,326	343,921	331,261

Business Lending revenue increased \$24 million for the three months ended March 31, 2019 compared to the same period in 2018, primarily driven by higher leasing-related revenue.

Global Transaction Services revenue increased \$198 million to \$2.2 billion for the three months ended March 31, 2019 compared to the same period in 2018 driven by higher deposit rates and increased deposit balances.

Average loans and leases increased five percent for the three months ended March 31, 2019 compared to the same period in 2018 driven by growth in the commercial and industrial portfolio. Average deposits increased eight percent due to growth in domestic interest-bearing balances.

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. *Global Banking* originates certain deal-related transactions with our corporate and commercial clients that are executed and distributed by *Global Markets*. 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

	Global Banking		Total Corporation	
	Three Months Ended March 31			
(Dollars in millions)	2019	2018	2019	2018
Products				
Advisory	\$ 303	\$ 276	\$ 343	\$ 296
Debt issuance	327	356	748	827
Equity issuance	79	112	234	314
Gross investment banking fees	709	744	1,325	1,437
Self-led deals	(20)	(34)	(61)	(84)
Total investment banking fees	\$ 689	\$ 710	\$ 1,264	\$ 1,353

Total Corporation investment banking fees, excluding self-led deals, of \$1.3 billion, which are primarily included within *Global Banking* and *Global Markets*, decreased seven percent for the three months ended March 31, 2019 compared to the same period in 2018 primarily due to declines in debt and equity underwriting fees, partially offset by an increase in advisory fees.

Global Markets

	Three Months Ended March 31		
	2019	2018	% Change
(Dollars in millions)			
Net interest income	\$ 953	\$ 1,020	(7)%
Noninterest income:			
Investment and brokerage services	444	488	(9)
Investment banking fees	537	609	(12)
Trading account income	2,082	2,557	(19)
All other income	165	138	20
Total noninterest income	3,228	3,792	(15)
Total revenue, net of interest expense	4,181	4,812	(13)
Provision for credit losses	(23)	(3)	n/m
Noninterest expense	2,755	2,923	(6)
Income before income taxes	1,449	1,892	(23)
Income tax expense	413	492	(16)
Net income	\$ 1,036	\$ 1,400	(26)
Effective tax rate	28.5%	26.0%	
Return on average allocated capital	12	16	
Efficiency ratio	65.91	60.75	

Balance Sheet

Average	Three Months Ended March 31		
	2019	2018	% Change
Trading-related assets:			
Trading account securities	\$ 225,254	\$ 210,278	7%
Reverse repurchases	122,753	123,948	(1)
Securities borrowed	84,343	82,376	2
Derivative assets	41,953	46,567	(10)
Total trading-related assets	474,303	463,169	2
Total loans and leases	70,080	73,763	(5)
Total earning assets	472,414	486,107	(3)
Total assets	664,052	678,354	(2)
Total deposits	31,366	32,320	(3)
Allocated capital	35,000	35,000	—

Period end	Three Months Ended March 31		
	March 31 2019	December 31 2018	% Change
Total trading-related assets	\$ 485,637	\$ 447,998	8%
Total loans and leases	70,052	73,928	(5)
Total earning assets	470,700	457,224	3
Total assets	671,123	641,923	5
Total deposits	31,073	37,841	(18)

n/m = not meaningful

Global Markets offers sales and trading services and research services 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. For more information about Global Markets, see Business Segment Operations in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Net income for Global Markets decreased \$364 million to \$1.0 billion for the three months ended March 31, 2019 compared to the same period in 2018. Net DVA losses were \$90 million compared to gains of \$64 million during the same period in 2018. Excluding net DVA, net income decreased \$247 million to \$1.1 billion. These decreases were primarily driven by a decrease in revenue, partially offset by a reduction in noninterest expense.

Sales and trading revenue decreased \$685 million, and excluding net DVA, decreased \$531 million for the three months ended March 31, 2019 compared to the same period in 2018 due to declines in both FICC and Equities revenue. The benefit in the provision for credit losses increased \$20 million driven by lower loan balances. Noninterest expense decreased \$168 million to \$2.8 billion primarily driven by lower revenue-related expenses.

Average total assets decreased \$14.3 billion to \$664.1 billion for the three months ended March 31, 2019 compared to the same period in 2018 primarily due to lower client balances in Equities. Period-end total assets increased \$29.2 billion from December 31, 2018 to \$671.1 billion due to higher market levels following the December sell-off in the equity markets driving higher client balances and increased levels of inventory to facilitate expected client demand.

The return on average allocated capital was 12 percent, down from 16 percent compared to the same period in 2018, reflecting lower net income.

Sales and Trading Revenue

For a description of sales and trading revenue, see Business Segment Operations in the MD&A of the Corporation's 2018 Annual Report on Form 10-K. 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 net DVA, which is a non-GAAP financial measure. For more information on net DVA, see Supplemental Financial Data on page 5.

Sales and Trading Revenue (1, 2)

	Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Sales and trading revenue		
Fixed-income, currencies and commodities	\$ 2,279	\$ 2,633
Equities	1,181	1,512
Total sales and trading revenue	\$ 3,460	\$ 4,145
Sales and trading revenue, excluding net DVA (3)		
Fixed-income, currencies and commodities	\$ 2,358	\$ 2,556
Equities	1,192	1,525
Total sales and trading revenue, excluding net DVA	\$ 3,550	\$ 4,081

(1) Includes FTE adjustments of \$49 million and \$66 million for the three months ended March 31, 2019 and 2018. For more information on sales and trading revenue, see Note 3 – Derivatives to the Consolidated Financial Statements.

(2) Includes Global Banking sales and trading revenue of \$115 million and \$165 million for the three months ended March 31, 2019 and 2018.

(3) FICC and Equities sales and trading revenue, excluding net DVA, is a non-GAAP financial measure. FICC net DVA losses were \$79 million and gains were \$77 million for the three months ended March 31, 2019 and 2018. Equities net DVA losses were \$11 million and \$13 million for the three months ended March 31, 2019 and 2018.

The following explanations for period-over-period changes in sales and trading, FICC and Equities revenue exclude net DVA, but would be the same whether net DVA was included or excluded. FICC revenue decreased \$198 million for the three months ended March 31, 2019 compared to the same period in 2018 due to a reduction in client activity. The decline in FICC revenue was also

impacted by higher funding costs, which were driven by increases in market interest rates. Equities revenue decreased \$333 million for the three months ended March 31, 2019 compared to the same period in 2018, which benefited from higher market volatility resulting in higher client volumes and a strong trading performance in derivatives.

All Other

	Three Months Ended March 31		
	2019	2018	% Change
(Dollars in millions)			
Net interest income (loss)	\$ (5)	\$ 159	(103)%
Noninterest income (loss)	(626)	(582)	8
Total revenue, net of interest expense	(631)	(423)	49
Provision for credit losses	(54)	(152)	(64)
Noninterest expense	418	500	(16)
Loss before income taxes	(995)	(771)	29
Income tax benefit	(947)	(774)	22
Net income (loss)	\$ (48)	\$ 3	n/m

Balance Sheet

	Three Months Ended March 31		
	2019	2018	% Change
Average			
Total loans and leases	\$ 47,160	\$ 67,811	(30)%
Total assets (1)	195,635	199,298	(2)
Total deposits	20,691	23,115	(10)
Period end			
Total loans and leases	\$ 45,609	\$ 48,061	(5)%
Total assets (1)	178,680	195,466	(9)
Total deposits	21,472	18,541	16

(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. Average allocated assets were \$542.4 billion and \$514.6 billion for the three months ended March 31, 2019 and 2018, and period-end allocated assets were \$566.8 billion and \$540.8 billion at March 31, 2019 and December 31, 2018. n/m = not meaningful

All Other consists of ALM activities, equity investments, non-core mortgage loans and servicing activities, liquidating businesses and certain expenses not otherwise allocated to a business segment. ALM activities encompass certain residential mortgages, debt securities, and interest rate and foreign currency risk management activities. Substantially all of the results of ALM activities are allocated to our business segments. Equity investments include our merchant services joint venture, as well as a portfolio of equity, real estate and other alternative investments. For information on our merchant services joint venture, including the potential financial statement impact of certain pending renewal options relative to the term of the operating agreement, see Note 11 – Commitments and

Contingencies to the Consolidated Financial Statements. For additional information about All Other, see Business Segment Operations in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

The Corporation classifies consumer real estate loans as core or non-core based on loan and customer characteristics. For more information on the core and non-core portfolios, see Consumer Portfolio Credit Risk Management on page 22. 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. During the three months ended March 31, 2019, residential mortgage loans held for ALM activities decreased \$395 million to \$24.5 billion primarily

as a result of payoffs and paydowns. Non-core residential mortgage and home equity loans, which are principally runoff portfolios, are also held in *All Other*. During the three months ended March 31, 2019, total non-core loans decreased \$2.2 billion to \$21.3 billion due primarily to payoffs and paydowns as well as sales and Federal Housing Administration (FHA) loan conveyances.

Results for *All Other* were a net loss of \$48 million for the three months ended March 31, 2019 compared to net income of \$3 million in the same period in 2018, driven by a decline in revenue and a lower benefit in the provision for credit losses, partially offset by lower noninterest expense.

Revenue decreased \$208 million due to a decrease in net interest income from lower loan balances, primarily non-core loans, and a decrease in noninterest income.

The benefit in the provision for credit losses decreased \$98 million to \$54 million primarily driven by a slower pace of portfolio improvement.

Noninterest expense decreased \$82 million to \$418 million reflecting lower non-core mortgage costs, primarily due to lower volume, a decrease in compensation and benefits, and lower FDIC expense, partially offset by higher marketing expense.

The income tax benefit increased \$173 million reflecting a higher pretax loss as well as increased income tax benefit adjustments to eliminate the FTE treatment 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 12 – Commitments and Contingencies* to the Consolidated Financial Statements herein as well as *Off-Balance Sheet Arrangements and Contractual Obligations* in the MD&A of the Corporation's 2018 Annual Report on Form 10-K, and *Note 11 – Long-term Debt* and *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Representations and Warranties Obligations

For information on representations and warranties obligations in connection with the sale of mortgage loans, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K. 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 2018 Annual Report on Form 10-K.

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. 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 and the Board.

Our Risk Framework is the foundation for consistent and effective management of 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 Framework, our risk management activities 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 2018 Annual Report on Form 10-K.

Capital Management

The Corporation manages its capital position so that its capital is more than adequate to support its business activities and aligns with risk, risk appetite and strategic planning. 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 8.

CCAR and Capital Planning

The Board of Governors of the Federal Reserve System (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.

In addition to our previously announced repurchases associated with the 2018 CCAR capital plan, on February 7, 2019, we announced a plan to repurchase an additional \$2.5 billion of common stock through June 30, 2019, which was approved by the Federal Reserve. During the first quarter of 2019, we repurchased \$6.3 billion of common stock pursuant to the Board's repurchase authorizations. For additional information, see *Capital Management – CCAR and Capital Planning* in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Our stock repurchases are 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 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 amended. 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.

In April 2019, we submitted our 2019 CCAR capital plan and related supervisory stress tests. The Federal Reserve has announced that it will release CCAR capital plan summary results, including supervisory projections of capital ratios, losses and revenues under stress scenarios, and publish the results of stress tests conducted under the supervisory adverse and supervisory severely adverse scenarios by June 30, 2019.

Regulatory Capital

As a financial services holding company, we are subject to regulatory capital rules, including Basel 3, issued by U.S. banking regulators. The Corporation and its primary affiliated banking entity, BANA, are Advanced approaches institutions under Basel 3 and 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 Prompt Corrective Action (PCA) framework. As of March 31, 2019, Common equity tier 1 (CET1) and Tier 1 capital ratios for the Corporation were lower under the Standardized approach whereas the Advanced approaches yielded a lower Total capital ratio. For more information on Basel 3, see Capital Management in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Minimum Capital Requirements

Minimum capital requirements and related buffers were fully phased in as of January 1, 2019. The PCA framework established

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.

In order to avoid restrictions on capital distributions and discretionary bonus payments, the Corporation must meet risk-based capital ratio requirements that include a capital conservation buffer greater than 2.5 percent, plus any applicable countercyclical capital buffer and a global systemically important bank (G-SIB) surcharge. The buffers and surcharge must be comprised solely of CET1 capital.

The Corporation is also required to maintain a minimum supplementary leverage ratio (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. Our insured depository institution subsidiaries are required to maintain a minimum 6.0 percent SLR to be considered well capitalized under the PCA framework.

Capital Composition and Ratios

Table 7 presents Bank of America Corporation's capital ratios and related information in accordance with Basel 3 Standardized and Advanced approaches as measured at March 31, 2019 and December 31, 2018. As of the periods presented, the Corporation met the definition of well capitalized under current regulatory requirements.

Table 7 Bank of America Corporation Regulatory Capital under Basel 3

	Standardized Approach	Advanced Approaches	Regulatory Minimum (1)
(Dollars in millions, except as noted)			
Risk-based capital metrics:			
Common equity tier 1 capital	\$ 169,243	\$ 169,243	
Tier 1 capital	190,963	190,963	
Total capital (2)	223,745	215,634	
Risk-weighted assets (in billions)	1,455	1,423	
Common equity tier 1 capital ratio	11.6%	11.9%	9.5%
Tier 1 capital ratio	13.1	13.4	11.0
Total capital ratio	15.4	15.2	13.0
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) (3)	\$ 2,284	\$ 2,284	
Tier 1 leverage ratio	8.4%	8.4%	4.0
SLR leverage exposure (in billions)		\$ 2,822	
SLR		6.8%	5.0

	December 31, 2018		
Risk-based capital metrics:			
Common equity tier 1 capital	\$ 167,272	\$ 167,272	
Tier 1 capital	189,038	189,038	
Total capital (2)	221,304	212,878	
Risk-weighted assets (in billions)	1,437	1,409	
Common equity tier 1 capital ratio	11.6%	11.9%	8.25%
Tier 1 capital ratio	13.2	13.4	9.75
Total capital ratio	15.4	15.1	11.75
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) (3)	\$ 2,258	\$ 2,258	
Tier 1 leverage ratio	8.4%	8.4%	4.0
SLR leverage exposure (in billions)		\$ 2,791	
SLR		6.8%	5.0

(1) The March 31, 2019 and December 31, 2018 amounts include a capital conservation buffer of 2.5 percent and 1.875 percent and a G-SIB surcharge of 2.5 percent and 1.875 percent. The countercyclical capital buffer for both periods is zero. The SLR minimum includes a leverage buffer of 2.0 percent.

(2) 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.

(3) Reflects adjusted average total assets for the three months ended March 31, 2019 and December 31, 2018.

CET1 capital was \$169.2 billion at March 31, 2019, an increase of \$2.0 billion from December 31, 2018, driven by earnings and lower net unrealized losses on available-for-sale (AFS) debt securities included in accumulated other comprehensive income (OCI), partially offset by common stock repurchases and dividends. During the three months ended March 31, 2019, Total capital under the Advanced approaches increased \$2.8 billion primarily driven by the same factors as CET1 capital.

Risk-weighted assets under the Standardized approach, which yielded the lower CET1 capital ratio for March 31, 2019, increased \$17.5 billion during the three months ended March 31, 2019 to \$1,455 billion primarily due to an increase in other assets and client activity in *Global Markets*, partially offset by lower U.S. credit card loans.

Table 8 shows the capital composition at March 31, 2019 and December 31, 2018.

Table 8 Capital Composition under Basel 3

	March 31 2019	December 31 2018
(Dollars in millions)		
Total common shareholders' equity	\$ 244,684	\$ 242,999
Goodwill, net of related deferred tax liabilities	(68,573)	(68,572)
Deferred tax assets arising from net operating loss and tax credit carryforwards	(5,695)	(5,981)
Intangibles, other than mortgage servicing rights and goodwill, net of related deferred tax liabilities	(1,352)	(1,294)
Other	179	120
Common equity tier 1 capital	169,243	167,272
Qualifying preferred stock, net of issuance cost	22,326	22,326
Other	(606)	(560)
Tier 1 capital	190,963	189,038
Tier 2 capital instruments	22,458	21,887
Eligible credit reserves included in Tier 2 capital	2,268	1,972
Other	(55)	(19)
Total capital under the Advanced approaches	\$ 215,634	\$ 212,878

Table 9 shows the components of risk-weighted assets as measured under Basel 3 at March 31, 2019 and December 31, 2018.

Table 9 Risk-weighted Assets under Basel 3

	Standardized Approach	Advanced Approaches	Standardized Approach	Advanced Approaches
(Dollars in billions)				
	March 31, 2019		December 31, 2018	
Credit risk	\$ 1,402	\$ 839	\$ 1,384	\$ 827
Market risk	53	52	53	52
Operational risk	n/a	500	n/a	500
Risks related to credit valuation adjustments	n/a	32	n/a	30
Total risk-weighted assets	\$ 1,455	\$ 1,423	\$ 1,437	\$ 1,409

n/a = not applicable

Bank of America, N.A. Regulatory Capital

Table 10 presents regulatory capital information for BANA in accordance with Basel 3 Standardized and Advanced approaches as measured at March 31, 2019 and December 31, 2018. BANA met the definition of well capitalized under the PCA framework for both periods.

Table 10 Bank of America, N.A. Regulatory Capital under Basel 3

	Standardized Approach		Advanced Approaches		Regulatory Minimum (1)
	Ratio	Amount	Ratio	Amount	
(Dollars in millions)					
	March 31, 2019				
Common equity tier 1 capital	12.6%	\$ 152,171	15.7%	\$ 152,171	7.0%
Tier 1 capital	12.6	152,171	15.7	152,171	8.5
Total capital	13.6	164,145	16.2	156,344	10.5
Tier 1 leverage	9.0	152,171	9.0	152,171	5.0
SLR			7.3	152,171	6.0
	December 31, 2018				
Common equity tier 1 capital	12.5%	\$ 149,824	15.6%	\$ 149,824	6.5%
Tier 1 capital	12.5	149,824	15.6	149,824	8.0
Total capital	13.5	161,760	16.0	153,627	10.0
Tier 1 leverage	8.7	149,824	8.7	149,824	5.0
SLR			7.1	149,824	6.0

(1) Risk-based capital regulatory minimums at March 31, 2019 are the minimum ratios under Basel 3 including a capital conservation buffer of 2.5 percent. The regulatory minimums for the leverage ratios as of both periods and risk-based capital ratios as of December 31, 2018 are the percent required to be considered well capitalized under the PCA framework.

Total Loss-Absorbing Capacity Requirements

Effective January 1, 2019, the Corporation is subject to the Federal Reserve's final rule requiring G-SIBs to maintain minimum levels of total loss-absorbing capacity (TLAC) and long-term debt. TLAC consists of the Corporation's Tier 1 capital and eligible long-term debt issued directly by the Corporation. Eligible long-term debt for TLAC ratios is comprised of unsecured debt that has a remaining maturity of at least one year and satisfies additional requirements

as prescribed in the TLAC final rule. As with the risk-based capital ratios and SLR, the Corporation is required to maintain TLAC ratios in excess of minimum requirements plus applicable buffers in order to avoid restrictions on capital distributions and discretionary bonus payments. Table 11 presents the Corporation's TLAC and long-term debt ratios and related information as of March 31, 2019.

Table 11 Bank of America Corporation Total Loss-Absorbing Capacity and Long-Term Debt

	TLAC	Regulatory Minimum (1)	Long-term Debt	Regulatory Minimum (2)
(Dollars in millions, except ratios)				
March 31, 2019				
Total eligible balance	\$ 360,927		\$ 165,568	
Percentage of risk-weighted assets (3)	24.8%	22.0%	11.4%	8.5%
Percentage of SLR leverage exposure	12.8	9.5	5.9	4.5

(1) The TLAC risk-weighted assets regulatory minimum consists of 18.0 percent plus a TLAC risk-weighted assets buffer comprised of 2.5 percent plus the method 1 GSIB surcharge of 1.5 percent. The countercyclical buffer is zero for this period. The TLAC SLR leverage exposure regulatory minimum consists of 7.5 percent plus a 2.0 percent TLAC leverage buffer. The TLAC risk-weighted assets and leverage buffers must be comprised solely of CET1 capital and Tier 1 capital, respectively.

(2) The long-term debt risk-weighted assets regulatory minimum is comprised of 6.0 percent plus an additional 2.5 percent requirement based on the Corporation's method 2 GSIB surcharge.

(3) The approach that yields the higher risk-weighted assets is used to calculate TLAC and long-term debt ratios, which was the Standardized approach as of March 31, 2019.

Regulatory Developments

The following supplements the disclosure in Capital Management – Regulatory Developments in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Deduction of Unsecured Debt of G-SIBs

On April 2, 2019, the U.S. banking regulators issued a proposal that would require Advanced approaches firms to deduct investments in TLAC-eligible long-term debt and other pari passu or subordinated debt instruments issued by G-SIBs above a certain threshold from regulatory capital. The proposal is intended to limit the interconnectedness between G-SIBs and is complementary to existing regulatory capital requirements that generally require banks to deduct investments in the regulatory capital of financial institutions.

Broker-dealer Regulatory Capital and Securities Regulation

The Corporation's principal U.S. broker-dealer subsidiaries are Merrill Lynch, Pierce, Fenner & Smith Incorporated (MLPF&S) and Merrill Lynch Professional Clearing Corp (MLPCC). MLPCC is a fully-guaranteed subsidiary of MLPF&S and provides clearing and settlement services. Both entities are subject to the net capital requirements of SEC Rule 15c3-1. Both entities are also registered as futures commission merchants and are subject to U.S. 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 March 31, 2019, MLPF&S' regulatory net capital as defined by Rule 15c3-1 was \$13.3 billion and exceeded the minimum requirement of \$2.1 billion by \$11.1 billion. MLPCC's net capital of \$4.9 billion exceeded the minimum requirement of \$588 million by \$4.3 billion.

In accordance with the Alternative Net Capital Requirements, MLPF&S is required to maintain tentative net capital in excess of \$1.0 billion and net capital in excess of \$500 million and to notify the SEC in the event its tentative net capital is less than \$5.0 billion. At March 31, 2019, MLPF&S had tentative net capital and net capital in excess of the minimum and notification requirements.

As a result of resolution planning, the current business of MLPF&S is expected to be reorganized into two affiliated broker-

dealers: MLPF&S and BofA Securities, Inc., a newly formed broker-dealer. Under the contemplated reorganization, which is expected to occur in the second quarter of 2019, BofA Securities, Inc. would become the legal entity for the institutional services that are now provided by MLPF&S. MLPF&S' retail services would remain with MLPF&S. For more information on resolution planning, see Item 1. Business – Resolution Planning of the Corporation's 2018 Annual Report on Form 10-K.

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 March 31, 2019, MLI's capital resources were \$35.0 billion, which exceeded the minimum Pillar 1 requirement of \$13.6 billion.

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, as well as our liquidity sources, liquidity arrangements, contingency planning and credit ratings discussed below, see Liquidity Risk in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

NB Holdings Corporation

We have intercompany arrangements with certain key subsidiaries under which we transferred certain assets of Bank of America Corporation, as the parent company, which is a separate and distinct legal entity from our banking and nonbank subsidiaries, 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. 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.

Global Liquidity Sources and Other Unencumbered Assets

Table 12 presents average Global Liquidity Sources (GLS) for the three months ended March 31, 2019 and December 31, 2018.

Table 12 Average Global Liquidity Sources

	Three Months Ended	
	March 31 2019	December 31 2018
(Dollars in billions)		
Parent company and NB Holdings	\$ 65	\$ 76
Bank subsidiaries	429	420
Other regulated entities	52	48
Total Average Global Liquidity Sources	\$ 546	\$ 544

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. Typically, parent company and NB Holdings liquidity is in the form of cash deposited with BANA.

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 \$354 billion and \$344 billion at March 31, 2019 and December 31, 2018. 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.

Liquidity held in other regulated entities, comprised primarily of broker-dealer subsidiaries, 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. Our other regulated entities also hold unencumbered investment-grade securities and equities that we believe could be used to generate additional liquidity.

Table 13 presents the composition of average GLS for the three months ended March 31, 2019 and December 31, 2018.

Table 13 Average Global Liquidity Sources Composition

	Three Months Ended	
	March 31 2019	December 31 2018
(Dollars in billions)		
Cash on deposit	\$ 115	\$ 113
U.S. Treasury securities	83	81
U.S. agency securities and mortgage-backed securities	338	340
Non-U.S. government securities	10	10
Total Average Global Liquidity Sources	\$ 546	\$ 544

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. Our average consolidated HQLA, on a net basis, was \$444 billion and \$446 billion for the three months ended March 31, 2019 and December 31, 2018. For the same periods, the average consolidated LCR was 115 percent and 118 percent. Our LCR will fluctuate due to normal business flows from customer activity.

Liquidity Stress Analysis

We utilize liquidity stress analysis to assist us in determining the appropriate amounts of liquidity to maintain at the parent company and our subsidiaries to meet contractual and contingent cash outflows under a range of scenarios. For more information on our liquidity stress analysis, see Liquidity Risk – Liquidity Stress Analysis in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

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. We fund a substantial portion of our lending activities through our deposits, which were \$1.38 trillion at both March 31, 2019 and December 31, 2018.

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.

Long-term Debt

During the three months ended March 31, 2019, we issued \$14.7 billion of long-term debt consisting of \$9.6 billion for Bank of America Corporation, substantially all of which was TLAC eligible, \$1.5 billion for Bank of America, N.A. and \$3.6 billion of other debt. Substantially all of the long-term, TLAC-eligible senior notes issued by Bank of America Corporation since late 2016 are callable, at our option, at least one year before each stated maturity date. The call features give us the flexibility to retire long-term notes before their final year outstanding, when they are no longer eligible to count toward TLAC requirements, and replace them with new TLAC-eligible debt, should we choose to do so.

During the three months ended March 31, 2019, we had total long-term debt maturities and redemptions in the aggregate of \$14.3 billion consisting of \$6.2 billion for Bank of America Corporation, \$5.6 billion for Bank of America, N.A. and \$2.5 billion of other debt. Table 14 presents the carrying value of aggregate annual contractual maturities of long-term debt at March 31, 2019.

Table 14 Long-term Debt by Maturity

(Dollars in millions)	Remainder of 2019	2020	2021	2022	2023	Thereafter	Total
Bank of America Corporation							
Senior notes (1)	\$ 9,325	\$ 10,301	\$ 15,892	\$ 14,786	\$ 22,720	\$ 77,930	\$ 150,954
Senior structured notes	1,206	896	494	1,946	324	10,289	15,155
Subordinated notes	973	—	356	375	—	20,797	22,501
Junior subordinated notes	—	—	—	—	—	736	736
Total Bank of America Corporation	11,504	11,197	16,742	17,107	23,044	109,752	189,346
Bank of America, N.A.							
Senior notes	—	2,750	—	—	505	26	3,281
Subordinated notes	1	—	—	—	—	1,660	1,661
Advances from Federal Home Loan Banks	8,757	3,010	2	3	1	101	11,874
Securitizations and other Bank VIEs (2)	750	3,099	4,003	—	—	5	7,857
Other	119	90	—	14	130	30	383
Total Bank of America, N.A.	9,627	8,949	4,005	17	636	1,822	25,056
Other debt							
Structured liabilities	3,973	4,928	1,501	902	923	6,897	19,124
Nonbank VIEs (2)	12	—	—	—	12	301	325
Other	—	—	—	—	—	78	78
Total other debt	3,985	4,928	1,501	902	935	7,276	19,527
Total long-term debt	\$ 25,116	\$ 25,074	\$ 22,248	\$ 18,026	\$ 24,615	\$ 118,850	\$ 233,929

(1) Total includes \$91.7 billion of outstanding notes that are both TLAC eligible and callable at least one year before their stated maturities, including \$1.0 billion that will be callable and become TLAC ineligible during the remainder of 2019, \$7.3 billion, \$11.6 billion, \$14.6 billion and \$10.6 billion that will do so during each of 2020 through 2023, respectively, and \$46.6 billion thereafter.

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

Table 15 presents our long-term debt by major currency at March 31, 2019 and December 31, 2018.

Table 15 Long-term Debt by Major Currency

(Dollars in millions)	March 31 2019	December 31 2018
U.S. dollar	\$ 185,940	\$ 180,724
Euro	32,390	34,328
British pound	5,577	5,450
Japanese yen	3,904	3,038
Canadian dollar	3,023	2,936
Australian dollar	1,753	1,722
Other	1,342	1,194
Total long-term debt	\$ 233,929	\$ 229,392

Total long-term debt increased \$4.5 billion during the three months ended March 31, 2019 primarily due to debt issuances and changes in fair value, partially offset by maturities and redemptions. We may, from time to time, purchase outstanding debt instruments in various transactions, depending on market conditions, liquidity and other factors. Our other regulated entities may also make markets in our debt instruments to provide liquidity for investors. For more information on long-term debt funding, see Note 11 – Long-term Debt to the Consolidated Financial Statements of the Corporation's 2018 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 39.

We may issue unsecured debt in the form of structured notes for client purposes, certain of which qualify as TLAC-eligible debt. During the three months ended March 31, 2019, we issued \$1.8 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.

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.

On March 6, 2019, Moody's Investors Service (Moody's) upgraded the long-term and short-term ratings of the Corporation by one notch to A2/P-1 from A3/P-2 for senior debt, as well as the long-term ratings of its rated subsidiaries, including BANA, which the agency upgraded to Aa2 from Aa3 for senior debt. Moody's concurrently affirmed the short-term ratings of the Corporation's rated subsidiaries, including BANA. Moody's cited the Corporation's strengthening profitability, continued adherence to a conservative risk profile, and stable capital ratios as rationale for the upgrade. This concluded the review for upgrade that Moody's initiated on December 5, 2018. The rating outlook for all long-term ratings is currently stable.

The ratings from Standard & Poor's Global Ratings (S&P) and Fitch Ratings for the Corporation and its subsidiaries did not

change from those disclosed in the Corporation's 2018 Annual Report on Form 10-K. Table 16 presents the Corporation's current long-term/short-term senior debt ratings and outlooks expressed by the rating agencies.

For more information on additional collateral and termination payments that could be required in connection with certain over-

the-counter derivative contracts and other trading agreements as a result of a credit rating downgrade, see Note 3 – Derivatives to the Consolidated Financial Statements herein and Item 1A. Risk Factors of the Corporation's 2018 Annual Report on Form 10-K.

Table 16 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
Bank of America Corporation	A2	P-1	Stable	A-	A-2	Stable	A+	F1	Stable
Bank of America, N.A.	Aa2	P-1	Stable	A+	A-1	Stable	AA-	F1+	Stable
Merrill Lynch, Pierce, Fenner & Smith Incorporated	NR	NR	NR	A+	A-1	Stable	AA-	F1+	Stable
Merrill Lynch International	NR	NR	NR	A+	A-1	Stable	A+	F1	Stable

NR = not rated

Credit Risk Management

For information on our credit risk management activities, see Consumer Portfolio Credit Risk Management below, Commercial Portfolio Credit Risk Management on page 29, Non-U.S. Portfolio on page 34, Provision for Credit Losses on page 35, Allowance for Credit Losses on page 35, and Note 5 – Outstanding Loans and Leases and Note 6 – Allowance for Credit Losses to the Consolidated Financial Statements. For information on the new accounting standard on credit losses that is effective on January 1, 2020 and the potential impact on our allowance for credit losses, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

Consumer Portfolio Credit Risk Management

Credit risk management for the consumer portfolio begins with initial underwriting and continues throughout a borrower's credit cycle. Statistical techniques in conjunction with experiential judgment are used in all aspects of portfolio management including underwriting, product pricing, risk appetite, setting credit limits, and establishing operating processes and metrics to quantify and balance risks and returns. Statistical models are built using detailed behavioral information from external sources such as credit bureaus and/or internal historical experience 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 home prices continued during the three months ended March 31, 2019 resulting in improved credit quality compared to December 31, 2018. Additionally, lower credit losses in the consumer real estate portfolio were partially offset by

seasoning in the U.S. credit card portfolio compared to the same period in 2018.

Improved credit quality and continued loan balance runoff primarily in the non-core consumer real estate portfolio, partially offset by seasoning within the U.S. credit card portfolio, drove a \$46 million decrease in the consumer allowance for loan and lease losses during the three months ended March 31, 2019 to \$4.8 billion. For additional information, see Allowance for Credit Losses on page 35.

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 and Note 5 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Table 17 presents our outstanding consumer loans and leases, 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 (bankruptcy loans 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 and Freddie Mac (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). Nonperforming loans and accruing balances past due 90 days or more also do not include loans accounted for under the fair value option even though the customer may be contractually past due.

Table 17 Consumer Credit Quality

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)						
Residential mortgage (1)	\$ 212,023	\$ 208,557	\$ 1,773	\$ 1,893	\$ 1,593	\$ 1,884
Home equity	46,241	48,286	1,751	1,893	—	—
U.S. credit card	93,009	98,338	n/a	n/a	1,005	994
Direct/Indirect consumer (2)	89,548	91,166	54	56	31	38
Other consumer (3)	152	202	—	—	—	—
Consumer loans excluding loans accounted for under the fair value option	\$ 440,973	\$ 446,549	\$ 3,578	\$ 3,842	\$ 2,629	\$ 2,916
Loans accounted for under the fair value option (4)	668	682				
Total consumer loans and leases	\$ 441,641	\$ 447,231				
Percentage of outstanding consumer loans and leases (5)	n/a	n/a	0.81%	0.86%	0.60%	0.65%
Percentage of outstanding consumer loans and leases, excluding fully-insured loan portfolios (5)	n/a	n/a	0.85	0.90	0.25	0.24

(1) Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At March 31, 2019 and December 31, 2018, residential mortgage includes \$1.2 billion and \$1.4 billion of loans on which interest had been curtailed by the FHA, and therefore were no longer accruing interest, although principal was still insured, and \$391 million and \$498 million of loans on which interest was still accruing.

(2) Outstandings include auto and specialty lending loans and leases of \$49.9 billion and \$50.1 billion, unsecured consumer lending loans of \$355 million and \$383 million, U.S. securities-based lending loans of \$35.8 billion and \$37.0 billion, non-U.S. consumer loans of \$2.8 billion and \$2.9 billion and other consumer loans of \$697 million and \$746 million at March 31, 2019 and December 31, 2018.

(3) Substantially all of other consumer at March 31, 2019 and December 31, 2018 is consumer overdrafts.

(4) Consumer loans accounted for under the fair value option include residential mortgage loans of \$315 million and \$336 million and home equity loans of \$353 million and \$346 million at March 31, 2019 and December 31, 2018. For more information on the fair value option, see Note 16 – Fair Value Option to the Consolidated Financial Statements.

(5) Excludes consumer loans accounted for under the fair value option. At March 31, 2019 and December 31, 2018, \$10 million and \$12 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 18 presents net charge-offs and related ratios for consumer loans and leases.

Table 18 Consumer Net Charge-offs and Related Ratios

(Dollars in millions)	Net Charge-offs		Net Charge-off Ratios (1)	
	Three Months Ended March 31			
	2019	2018	2019	2018
Residential mortgage	\$ (16)	\$ (6)	(0.03)%	(0.01)%
Home equity	11	33	0.10	0.23
U.S. credit card	745	701	3.18	3.01
Direct/Indirect consumer	54	59	0.24	0.25
Other consumer	41	43	n/m	n/m
Total	\$ 835	\$ 830	0.77	0.75

(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.

n/m = not meaningful

Table 19 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, loan-to-value (LTV), Fair Isaac Corporation (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. All other loans are generally characterized as non-core loans and represent runoff portfolios. Core loans as reported in Table 19 include loans held in the *Consumer Banking* and *GWIM* segments, as well as loans held for ALM activities in *All Other*.

As shown in Table 19, outstanding core consumer real estate loans increased \$3.5 billion during the three months ended March 31, 2019 driven by an increase of \$4.8 billion in residential mortgage, partially offset by a \$1.3 billion decrease in home equity. During the three months ended March 31, 2019 and 2018, we sold \$950 million and \$825 million of consumer real estate loans.

Table 19 Consumer Real Estate Portfolio (1)

	Outstandings		Nonperforming		Net Charge-offs	
(Dollars in millions)	March 31 2019	December 31 2018	March 31 2019	December 31 2018	Three Months Ended March 31	
					2019	2018
Core portfolio						
Residential mortgage	\$ 198,524	\$ 193,695	\$ 976	\$ 1,010	\$ (3)	\$ 9
Home equity	38,706	40,010	906	955	21	23
Total core portfolio	237,230	233,705	1,882	1,965	18	32
Non-core portfolio						
Residential mortgage	13,499	14,862	797	883	(13)	(15)
Home equity	7,535	8,276	845	938	(10)	10
Total non-core portfolio	21,034	23,138	1,642	1,821	(23)	(5)
Consumer real estate portfolio						
Residential mortgage	212,023	208,557	1,773	1,893	(16)	(6)
Home equity	46,241	48,286	1,751	1,893	11	33
Total consumer real estate portfolio	\$ 258,264	\$ 256,843	\$ 3,524	\$ 3,786	\$ (5)	\$ 27

	Allowance for Loan and Lease Losses		Provision for Loan and Lease Losses	
	March 31 2019	December 31 2018	Three Months Ended March 31	
			2019	2018
Core portfolio				
Residential mortgage	\$ 213	\$ 214	\$ (4)	\$ 8
Home equity	185	228	(22)	(1)
Total core portfolio	398	442	(26)	7
Non-core portfolio				
Residential mortgage	166	208	(31)	(86)
Home equity	258	278	(13)	(49)
Total non-core portfolio	424	486	(44)	(135)
Consumer real estate portfolio				
Residential mortgage	379	422	(35)	(78)
Home equity	443	506	(35)	(50)
Total consumer real estate portfolio	\$ 822	\$ 928	\$ (70)	\$ (128)

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option. Consumer loans accounted for under the fair value option included residential mortgage loans of \$315 million and \$336 million and home equity loans of \$353 million and \$346 million at March 31, 2019 and December 31, 2018. For additional information, see Note 16 – Fair Value Option to the Consolidated Financial Statements.

We believe that the presentation of information adjusted to exclude the impact of 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 tables and discussions of the residential mortgage and home equity portfolios, we exclude loans accounted for under the fair value option and provide information that excludes the impact of the fully-insured loan portfolio in certain credit quality statistics.

Residential Mortgage

The residential mortgage portfolio made up the largest percentage of our consumer loan portfolio at 48 percent of consumer loans and leases at March 31, 2019. Approximately 46 percent of the residential mortgage portfolio was in *Consumer Banking* and 37 percent was in *GWM*. The remaining portion was in *All Other* and was 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 increased \$3.5 billion during the three months ended March 31, 2019 as retention of new originations was partially offset by loan sales of \$838 million and runoff.

At March 31, 2019 and December 31, 2018, the residential mortgage portfolio included \$19.6 billion and \$20.1 billion of outstanding fully-insured loans, of which \$13.3 billion and \$14.0 billion had FHA insurance with the remainder protected by long-term standby agreements. At March 31, 2019 and December 31, 2018, \$3.1 billion and \$3.5 billion of the FHA-insured loan population were repurchases of delinquent FHA loans pursuant to our servicing agreements with GNMA.

Table 20 presents certain residential mortgage key credit statistics on both a reported basis and excluding the fully-insured loan portfolio. The following discussion presents the residential mortgage portfolio excluding the fully-insured loan portfolio.

Table 20 Residential Mortgage – Key Credit Statistics

	Reported Basis (1)		Excluding Fully-insured Loans (1)	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)				
Outstandings	\$ 212,023	\$ 208,557	\$ 192,389	\$ 188,427
Accruing past due 30 days or more	3,410	3,945	1,020	1,155
Accruing past due 90 days or more	1,593	1,884	—	—
Nonperforming loans	1,773	1,893	1,773	1,893
Percent of portfolio				
Refreshed LTV greater than 90 but less than or equal to 100	2 %	2 %	2 %	2 %
Refreshed LTV greater than 100	1	1	1	1
Refreshed FICO below 620	3	4	2	2
2006 and 2007 vintages (2)	5	6	5	6

Three Months Ended March 31			
2019	2018	2019	2018
(0.03)%	(0.01)%	(0.03)%	(0.01)%

Net charge-off ratio (3)

(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 accounted for \$495 million and \$536 million, or 28 percent for both periods, of nonperforming residential mortgage loans at March 31, 2019 and December 31, 2018.

(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 \$120 million during the three months ended March 31, 2019 primarily driven by sales. Of the nonperforming residential mortgage loans at March 31, 2019, \$701 million, or 40 percent, were current on contractual payments. Loans accruing past due 30 days or more decreased \$135 million due to continued improvement in credit quality as well as loan sales in the non-core portfolio.

Net recoveries increased \$10 million to \$16 million for the three months ended March 31, 2019 compared to the same period in 2018 primarily due to continued improvement in credit quality.

Loans with a refreshed LTV greater than 100 percent represented one percent of the residential mortgage loan portfolio at both March 31, 2019 and December 31, 2018. Of the loans with a refreshed LTV greater than 100 percent, 99 percent were performing at both March 31, 2019 and December 31, 2018. 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.

Of the \$192.4 billion in total residential mortgage loans outstanding at March 31, 2019, as shown in Table 20, 29 percent were originated as interest-only loans. The outstanding balance of interest-only residential mortgage loans that have entered the amortization period was \$8.9 billion, or 16 percent, at March 31, 2019. 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 March 31, 2019, \$196 million, or two percent, of outstanding interest-only residential mortgages that had entered the amortization period were accruing past due 30 days or more compared to \$1.0 billion, or one percent, for the entire residential mortgage portfolio. In addition, at March 31, 2019, \$367 million, or four percent, of outstanding interest-only residential mortgage loans that had entered the amortization period were nonperforming, of which \$126 million were contractually current, compared to \$1.8 billion, or one percent, for the entire residential mortgage portfolio. 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. Approximately 91 percent of these loans that have yet to enter the amortization period will not be required to make a fully-amortizing payment until 2022 or later.

Table 21 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 of outstandings at both March 31, 2019 and December 31, 2018. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 13 percent of outstandings at both March 31, 2019 and December 31, 2018.

Table 21 Residential Mortgage State Concentrations

	Outstandings (1)		Nonperforming (1)		Net Charge-offs	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	Three Months Ended March 31	
(Dollars in millions)					2019	2018
California	\$ 78,314	\$ 76,323	\$ 296	\$ 314	\$ (8)	\$ (10)
New York (2)	19,609	19,219	198	222	—	4
Florida (2)	11,786	11,624	200	221	(3)	(5)
Texas	7,943	7,820	88	102	(1)	1
New Jersey (2)	7,271	7,051	93	98	(2)	2
Other	67,466	66,390	898	936	(2)	2
Residential mortgage loans (3)	\$ 192,389	\$ 188,427	\$ 1,773	\$ 1,893	\$ (16)	\$ (6)
Fully-insured loan portfolio	19,634	20,130				
Total residential mortgage loan portfolio	\$ 212,023	\$ 208,557				

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

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

(3) Amounts exclude the fully-insured loan portfolio.

Home Equity

At March 31, 2019, the home equity portfolio made up 10 percent of the consumer portfolio and was comprised of home equity lines of credit (HELOCs), home equity loans and reverse mortgages.

At March 31, 2019, our HELOC portfolio had an outstanding balance of \$42.7 billion, or 92 percent of the total home equity portfolio, compared to \$44.3 billion, also 92 percent, at December 31, 2018. HELOCs generally have an initial draw period of 10 years, and after the initial draw period ends, the loans generally convert to 15- or 20-year amortizing loans.

At March 31, 2019, our home equity loan portfolio had an outstanding balance of \$1.7 billion, or four percent of the total home equity portfolio, compared to \$1.8 billion, also four percent, at December 31, 2018. Home equity loans are almost all fixed-rate loans with amortizing payment terms of 10 to 30 years, and of the \$1.7 billion at March 31, 2019, 68 percent have 25- to 30-year terms. At March 31, 2019, our reverse mortgage portfolio had an outstanding balance of \$1.8 billion, or four percent of the total home equity portfolio, compared to \$2.2 billion, also four percent, at December 31, 2018. We no longer originate reverse mortgages.

At March 31, 2019, 76 percent of the home equity portfolio was in *Consumer Banking*, 16 percent was in *All Other* and the

remainder of the portfolio was primarily in *GWM*. Outstanding balances in the home equity portfolio decreased \$2.0 billion during the three months ended March 31, 2019 primarily due to paydowns outpacing new originations and draws on existing lines. Of the total home equity portfolio at March 31, 2019 and December 31, 2018, \$16.6 billion and \$17.3 billion, or 36 percent for both periods, were in first-lien positions. At March 31, 2019, 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 \$7.8 billion, or 17 percent of our total home equity portfolio.

Unused HELOCs totaled \$43.8 billion at March 31, 2019 compared to \$43.1 billion at December 31, 2018. The increase was primarily driven by the impact of new production partially offset by accounts reaching the end of their draw period, which automatically eliminates open line exposure, and customers choosing to close accounts. The HELOC utilization rate was 49 percent and 51 percent at March 31, 2019 and December 31, 2018.

Table 22 presents certain home equity portfolio key credit statistics.

Table 22 Home Equity – Key Credit Statistics (1)

	March 31 2019	December 31 2018
(Dollars in millions)		
Outstandings	\$ 46,241	\$ 48,286
Accruing past due 30 days or more (2)	315	363
Nonperforming loans (2)	1,751	1,893
Percent of portfolio		
Refreshed CLTV greater than 90 but less than or equal to 100	2%	2%
Refreshed CLTV greater than 100	3	3
Refreshed FICO below 620	5	5
2006 and 2007 vintages (3)	22	22
	Three Months Ended March 31	
	2019	2018
Net charge-off ratio (4)	0.10%	0.23%

(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 include \$45 million and \$48 million and nonperforming loans include \$198 million and \$218 million of loans where we serviced the underlying first lien at March 31, 2019 and December 31, 2018.

(3) These vintages of loans have higher refreshed combined loan-to-value (CLTV) ratios and accounted for 48 percent and 49 percent of nonperforming home equity loans at March 31, 2019 and December 31, 2018, and 25 percent and 89 percent of net charge-offs in the three months ended March 31, 2019 and 2018.

(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 \$142 million during the three months ended March 31, 2019 as outflows, including sales, outpaced new inflows. Of the nonperforming home equity loans at March 31, 2019, \$1.1 billion, or 62 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. We estimate that approximately \$197 million of junior-lien loans had first-lien loans that were 90 days or more past due. In addition, \$383 million, or 22 percent, of nonperforming home equity loans were 180 days or more past due and had been written down to the estimated fair value of the collateral, less costs to sell. Accruing loans that were 30 days or more past due decreased \$48 million during the three months ended March 31, 2019.

Net charge-offs decreased \$22 million to \$11 million for the three months ended March 31, 2019 compared to the same period

in 2018 driven by favorable portfolio trends due in part to improvement in home prices and the U.S. economy.

Outstanding balances with a refreshed CLTV greater than 100 percent comprised three percent of the home equity portfolio at both March 31, 2019 and December 31, 2018. Outstanding balances 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 March 31, 2019.

Of the \$46.2 billion in total home equity portfolio outstandings at March 31, 2019, as shown in Table 22, 19 percent require interest-only payments. The outstanding balance of HELOCs that have reached the end of their draw period and have entered the

amortization period was \$15.2 billion at March 31, 2019. 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 March 31, 2019, \$239 million, or two percent, of outstanding HELOCs that had entered the amortization period were accruing past due 30 days or more. In addition, at March 31, 2019, \$1.6 billion, or 10 percent, of outstanding HELOCs that had entered the amortization period were nonperforming. Loans that have yet to enter the amortization period in our interest-only portfolio are primarily post-2008 vintages and generally have better credit quality than the previous vintages that had entered the amortization period. 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. During the three months ended March 31, 2019, 25 percent of these customers with an outstanding balance did not pay any principal on their HELOCs.

Table 23 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 March 31, 2019 and December 31, 2018. The Los Angeles-Long Beach-Santa Ana MSA within California made up 11 percent of the outstanding home equity portfolio at both March 31, 2019 and December 31, 2018.

Table 23 Home Equity State Concentrations

	Outstandings (1)		Nonperforming (1)		Net Charge-offs	
	March 31	December 31	March 31	December 31	Three Months Ended March 31	
	2019	2018	2019	2018	2019	2018
(Dollars in millions)						
California	\$ 13,228	\$ 13,515	\$ 502	\$ 536	\$ (5)	\$ (7)
Florida (2)	5,271	5,418	286	315	(3)	10
New Jersey (2)	3,781	3,871	142	150	5	9
New York (2)	3,472	3,590	183	194	10	6
Massachusetts	2,334	2,400	62	65	—	2
Other	18,155	19,492	576	633	4	13
Total home equity loan portfolio	\$ 46,241	\$ 48,286	\$ 1,751	\$ 1,893	\$ 11	\$ 33

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

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

U.S. Credit Card

At March 31, 2019, 97 percent of the U.S. credit card portfolio was managed in *Consumer Banking* with the remainder in *GWM*. Outstandings in the U.S. credit card portfolio decreased \$5.3 billion during the three months ended March 31, 2019 to \$93.0 billion due to a seasonal decline in purchase volumes. Net charge-offs increased \$44 million to \$745 million during the three months ended March 31, 2019 compared to the same period in 2018 due to portfolio seasoning. U.S. credit card loans 30 days or more past due and still accruing interest decreased \$57 million during the

three months ended March 31, 2019 from seasonal declines, while loans 90 days or more past due and still accruing interest increased \$11 million.

Unused lines of credit for U.S. credit card totaled \$340.8 billion and \$334.8 billion at March 31, 2019 and December 31, 2018. The increase in unused lines was driven by seasonally lower purchase volumes as well as account growth and lines of credit increases.

Table 24 presents certain state concentrations for the U.S. credit card portfolio.

Table 24 U.S. Credit Card State Concentrations

	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs	
	March 31	December 31	March 31	December 31	Three Months Ended March 31	
	2019	2018	2019	2018	2019	2018
(Dollars in millions)						
California	\$ 15,272	\$ 16,062	\$ 168	\$ 163	\$ 132	\$ 116
Florida	8,468	8,840	122	119	90	77
Texas	7,391	7,730	88	84	59	56
New York	5,736	6,066	78	81	61	70
Washington	4,291	4,558	25	24	18	15
Other	51,851	55,082	524	523	385	367
Total U.S. credit card portfolio	\$ 93,009	\$ 98,338	\$ 1,005	\$ 994	\$ 745	\$ 701

Direct/Indirect Consumer

At March 31, 2019, 56 percent of the direct/indirect portfolio was included in *Consumer Banking* (consumer auto and specialty lending – automotive, recreational vehicle, marine, aircraft and consumer personal loans) and 44 percent was included in *GWM* (principally securities-based lending loans).

Outstandings in the direct/indirect portfolio decreased \$1.6 billion during the three months ended March 31, 2019 to \$89.5 billion primarily due to declines in securities-based lending driven by repayments and lower draws. Net charge-offs decreased \$5 million to \$54 million during the three months ended March 31, 2019 compared to the same period in 2018.

Table 25 presents certain state concentrations for the direct/indirect consumer loan portfolio.

Table 25 Direct/Indirect State Concentrations

(Dollars in millions)	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	Three Months Ended March 31	
					2019	2018
California	\$ 11,578	\$ 11,734	\$ 3	\$ 4	\$ 7	\$ 6
Florida	10,019	10,240	4	4	8	10
Texas	9,668	9,876	5	6	10	9
New York	6,127	6,296	1	2	3	3
New Jersey	3,269	3,308	1	1	1	1
Other	48,887	49,712	17	21	25	30
Total direct/indirect loan portfolio	\$ 89,548	\$ 91,166	\$ 31	\$ 38	\$ 54	\$ 59

Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

Table 26 presents nonperforming consumer loans, leases and foreclosed properties activity for the three months ended March 31, 2019 and 2018. During the three months ended March 31, 2019, nonperforming consumer loans decreased \$264 million to \$3.6 billion primarily driven by loan sales of \$164 million.

At March 31, 2019, \$992 million, or 28 percent, of nonperforming loans were 180 days or more past due and had been written down to their estimated property value less costs to sell. In addition, at March 31, 2019, \$1.8 billion, or 51 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 \$8 million during the three months ended March 31, 2019 to \$236 million as liquidations

outpaced additions. Certain delinquent government-guaranteed loans (principally FHA-insured loans) are excluded 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.

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 March 31, 2019 and December 31, 2018, \$197 million and \$221 million of such junior-lien home equity loans were included in nonperforming loans and leases.

Nonperforming loans also include certain loans that have been modified in TDRs where economic concessions have been granted to borrowers experiencing financial difficulties. Nonperforming TDRs are included in Table 26.

Table 26 Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Nonperforming loans and leases, January 1	\$ 3,842	\$ 5,166
Additions	391	812
Reductions:		
Paydowns and payoffs	(188)	(245)
Sales	(164)	(269)
Returns to performing status (1)	(249)	(364)
Charge-offs	(28)	(147)
Transfers to foreclosed properties	(26)	(45)
Transfers to loans held-for-sale	—	(2)
Total net reductions to nonperforming loans and leases	(264)	(260)
Total nonperforming loans and leases, March 31	3,578	4,906
Foreclosed properties, March 31 (2)	236	264
Nonperforming consumer loans, leases and foreclosed properties, March 31	\$ 3,814	\$ 5,170
Nonperforming consumer loans and leases as a percentage of outstanding consumer loans and leases (3)	0.81%	1.10%
Nonperforming consumer loans, leases and foreclosed properties as a percentage of outstanding consumer loans, leases and foreclosed properties (3)	0.86	1.16

(1) 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.

(2) Foreclosed property balances do not include properties insured by certain government-guaranteed loans, principally FHA-insured, of \$400 million and \$680 million at March 31, 2019 and 2018.

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

Table 27 presents TDRs for the consumer real estate portfolio. Performing TDR balances are excluded from nonperforming loans and leases in Table 26.

Table 27 Consumer Real Estate Troubled Debt Restructurings

(Dollars in millions)	March 31, 2019			December 31, 2018		
	Nonperforming	Performing	Total	Nonperforming	Performing	Total
Residential mortgage (1, 2)	\$ 1,149	\$ 4,623	\$ 5,772	\$ 1,209	\$ 4,988	\$ 6,197
Home equity (3)	1,050	1,236	2,286	1,107	1,252	2,359
Total consumer real estate troubled debt restructurings	\$ 2,199	\$ 5,859	\$ 8,058	\$ 2,316	\$ 6,240	\$ 8,556

(1) At March 31, 2019 and December 31, 2018, residential mortgage TDRs deemed collateral dependent totaled \$1.5 billion and \$1.6 billion, and included \$942 million and \$960 million of loans classified as nonperforming and \$567 million and \$605 million of loans classified as performing.

(2) Residential mortgage performing TDRs included \$2.5 billion and \$2.8 billion of loans that were fully insured at March 31, 2019 and December 31, 2018.

(3) At March 31, 2019 and December 31, 2018, home equity TDRs deemed collateral dependent totaled \$1.2 billion and \$1.3 billion, and included \$934 million and \$961 million of loans classified as nonperforming and \$313 million and \$322 million of loans classified as performing.

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 26 as substantially all of the loans remain on accrual status until either charged off or paid in full. At March 31, 2019 and December 31, 2018, our renegotiated TDR portfolio was \$600 million and \$566 million, of which \$510 million and \$481 million were current or less than 30 days past due under the modified terms. The increase in the renegotiated TDR portfolio was primarily driven by new renegotiated enrollments outpacing runoff of existing portfolios.

Commercial Portfolio Credit Risk Management

Commercial credit risk is evaluated and managed with the goal that concentrations of credit exposure continue to be aligned with our risk appetite. 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 32, 35 and 38 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, see Commercial Portfolio Credit Risk Management – Industry Concentrations on page 32 and Table 35.

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 2018 Annual Report on Form 10-K.

Commercial Credit Portfolio

During the three months ended March 31, 2019, credit quality among large corporate and middle-market borrowers in our commercial and industrial portfolio remained strong. Credit quality of commercial real estate borrowers in most sectors remained stable with conservative LTV ratios. However, some of the commercial real estate markets experienced slowing tenant demand and decelerating rental income.

Total commercial utilized credit exposure decreased \$3.1 billion during the three months ended March 31, 2019 to \$617.9 billion primarily driven by lower held-for-sale loan exposure. The utilization rate for loans and leases, standby letters of credit (SBLCs) and financial guarantees, and commercial letters of credit, in the aggregate, was 59 percent at both March 31, 2019 and December 31, 2018.

Table 28 presents commercial credit exposure by type for utilized, unfunded and total binding committed credit exposure. Commercial utilized credit exposure includes SBLCs and financial guarantees 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.

Table 28 Commercial Credit Exposure by Type

(Dollars in millions)	Commercial Utilized (1)		Commercial Unfunded (2, 3, 4)		Total Commercial Committed	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
Loans and leases	\$ 503,974	\$ 499,664	\$ 365,954	\$ 369,282	\$ 869,928	\$ 868,946
Derivative assets (5)	42,391	43,725	—	—	42,391	43,725
Standby letters of credit and financial guarantees	33,604	34,941	430	491	34,034	35,432
Debt securities and other investments	24,443	25,425	5,001	4,250	29,444	29,675
Loans held-for-sale	5,307	9,090	14,871	14,812	20,178	23,902
Operating leases	6,204	6,060	—	—	6,204	6,060
Commercial letters of credit	1,040	1,210	323	168	1,363	1,378
Other	967	898	—	—	967	898
Total	\$ 617,930	\$ 621,013	\$ 386,579	\$ 389,003	\$ 1,004,509	\$ 1,010,016

(1) Commercial utilized exposure includes loans of \$5.5 billion and \$3.7 billion and issued letters of credit with a notional amount of \$61 million and \$100 million accounted for under the fair value option at March 31, 2019 and December 31, 2018.

(2) Commercial unfunded exposure includes commitments accounted for under the fair value option with a notional amount of \$3.0 billion at both March 31, 2019 and December 31, 2018.

(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 (i.e., syndicated or participated) to other financial institutions. The distributed amounts were \$10.4 billion and \$10.7 billion at March 31, 2019 and December 31, 2018.

(5) Derivative assets are carried at fair value, reflect the effects of legally enforceable master netting agreements and have been reduced by cash collateral of \$32.5 billion and \$32.4 billion at March 31, 2019 and December 31, 2018. Not reflected in utilized and committed exposure is additional non-cash derivative collateral held of \$32.6 billion and \$33.0 billion at March 31, 2019 and December 31, 2018, which consists primarily of other marketable securities.

Outstanding commercial loans and leases increased \$4.3 billion during the three months ended March 31, 2019 primarily in the non-U.S. commercial portfolio. The allowance for loan and lease losses for the commercial portfolio increased \$22 million to \$4.8 billion at March 31, 2019. For additional information, see Allowance for Credit Losses on page 35. Table 29 presents our commercial loans and leases portfolio and related credit quality information at March 31, 2019 and December 31, 2018.

Table 29 Commercial Credit Quality

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)						
Commercial and industrial:						
U.S. commercial	\$ 300,399	\$ 299,277	\$ 870	\$ 794	\$ 46	\$ 197
Non-U.S. commercial	101,029	98,776	80	80	—	—
Total commercial and industrial	401,428	398,053	950	874	46	197
Commercial real estate (1)	61,215	60,845	213	156	—	4
Commercial lease financing	21,196	22,534	52	18	13	29
	483,839	481,432	1,215	1,048	59	230
U.S. small business commercial (2)	14,616	14,565	57	54	91	84
Commercial loans excluding loans accounted for under the fair value option	498,455	495,997	1,272	1,102	150	314
Loans accounted for under the fair value option (3)	5,519	3,667	56	—	—	—
Total commercial loans and leases	\$ 503,974	\$ 499,664	\$ 1,328	\$ 1,102	\$ 150	\$ 314

(1) Includes U.S. commercial real estate of \$56.8 billion and \$56.6 billion and non-U.S. commercial real estate of \$4.4 billion and \$4.2 billion at March 31, 2019 and December 31, 2018.

(2) Includes card-related products.

(3) Commercial loans accounted for under the fair value option include U.S. commercial of \$2.8 billion and \$2.5 billion and non-U.S. commercial of \$2.7 billion and \$1.1 billion at March 31, 2019 and December 31, 2018. For more information on the fair value option, see Note 16 – Fair Value Option to the Consolidated Financial Statements.

Table 30 presents net charge-offs and related ratios for our commercial loans and leases for the three months ended March 31, 2019 and 2018.

Table 30 Commercial Net Charge-offs and Related Ratios

	Net Charge-offs		Net Charge-off Ratios (1)	
	Three Months Ended March 31			
(Dollars in millions)	2019	2018	2019	2018
Commercial and industrial:				
U.S. commercial	\$ 83	\$ 24	0.11%	0.03%
Non-U.S. commercial	—	4	—	0.02
Total commercial and industrial	83	28	0.08	0.03
Commercial real estate	5	(3)	0.03	(0.02)
Commercial lease financing	—	(1)	—	(0.01)
	88	24	0.07	0.02
U.S. small business commercial	68	57	1.90	1.67
Total commercial	\$ 156	\$ 81	0.13	0.07

(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 31 presents commercial reservable criticized utilized exposure by loan type. Criticized exposure corresponds to the Special Mention, Substandard and Doubtful asset categories as defined by regulatory authorities. Total commercial reservable criticized utilized exposure increased \$760 million, or seven percent, during the three months ended March 31, 2019 driven by a few single-name downgrades and was not indicative of broader issues in the portfolio. At March 31, 2019 and December 31, 2018, 90 percent and 91 percent of commercial reservable criticized utilized exposure was secured.

Table 31 Commercial Reservable Criticized Utilized Exposure (1, 2)

	March 31, 2019		December 31, 2018	
(Dollars in millions)				
Commercial and industrial:				
U.S. commercial	\$ 8,594	2.62%	\$ 7,986	2.43%
Non-U.S. commercial	1,117	1.05	1,013	0.97
Total commercial and industrial	9,711	2.23	8,999	2.08
Commercial real estate	958	1.53	936	1.50
Commercial lease financing	399	1.88	366	1.62
	11,068	2.13	10,301	1.99
U.S. small business commercial	753	5.15	760	5.22
Total commercial reservable criticized utilized exposure (1)	\$ 11,821	2.22	\$ 11,061	2.08

(1) Total commercial reservable criticized utilized exposure includes loans and leases of \$11.1 billion and \$10.3 billion and commercial letters of credit of \$699 million and \$781 million at March 31, 2019 and December 31, 2018.

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

Commercial and Industrial

Commercial and industrial loans include U.S. commercial and non-U.S. commercial portfolios.

U.S. Commercial

At March 31, 2019, 71 percent of the U.S. commercial loan portfolio, excluding small business, was managed in *Global Banking*, 14 percent in *Global Markets*, 12 percent in *GWIM* (generally business-purpose loans for high net worth clients) and the remainder primarily in *Consumer Banking*. U.S. commercial loans increased \$1.1 billion during the three months ended March 31, 2019, primarily in *Global Banking*. Net charge-offs increased \$59 million for the three months ended March 31, 2019 compared to the same period in 2018 due to a single-name utility client. Reservable criticized utilized exposure increased \$608 million, or eight percent, driven by a few single-name downgrades.

Non-U.S. Commercial

At March 31, 2019, 81 percent of the non-U.S. commercial loan portfolio was managed in *Global Banking* and 19 percent in *Global Markets*. Non-U.S. commercial loans increased \$2.3 billion during the three months ended March 31, 2019, primarily in *Global Banking*. Reservable criticized utilized exposure increased \$104 million, or 10 percent, driven by a single-name downgrade. For more information on the non-U.S. commercial portfolio, see Non-U.S. Portfolio on page 34.

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. Outstanding loans increased \$370 million, or one percent, during the three months ended March 31, 2019 to \$61.2 billion due to new originations slightly outpacing paydowns. The portfolio remains diversified across property types and geographic regions. California represented the largest state concentration at 23 percent of the commercial real estate portfolio at both March 31, 2019 and December 31, 2018. 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.

For the three months ended March 31, 2019, 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 \$60 million, or 28 percent, during the three months ended March 31, 2019 to \$272 million, due to a single-name downgrade.

Table 32 presents outstanding commercial real estate loans by geographic region, based on the geographic location of the collateral, and by property type.

Table 32 Outstanding Commercial Real Estate Loans

(Dollars in millions)	March 31 2019	December 31 2018
By Geographic Region		
California	\$ 14,235	\$ 14,002
Northeast	10,790	10,895
Southwest	7,462	7,339
Southeast	5,609	5,726
Florida	4,060	3,680
Midwest	3,933	3,772
Illinois	2,941	2,989
Midsouth	2,721	2,919
Northwest	2,013	2,178
Non-U.S.	4,389	4,240
Other (1)	3,062	3,105
Total outstanding commercial real estate loans \$	61,215	\$ 60,845
By Property Type		
Non-residential		
Office	\$ 17,034	\$ 17,246
Shopping centers / Retail	8,568	8,798
Multi-family rental	7,645	7,762
Hotels / Motels	6,824	7,248
Industrial / Warehouse	5,883	5,379
Unsecured	3,403	2,956
Multi-use	2,449	2,848
Other	7,810	7,029
Total non-residential	59,616	59,266
Residential	1,599	1,579
Total outstanding commercial real estate loans \$	61,215	\$ 60,845

(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.

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 52 percent and 51 percent of the U.S. small business commercial portfolio at March 31, 2019 and December 31, 2018. Of the U.S. small business commercial net charge-offs, 95 percent were credit card-related products for both the three months ended March 31, 2019 and 2018.

Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity

Table 33 presents the nonperforming commercial loans, leases and foreclosed properties activity during the three months ended March 31, 2019 and 2018. Nonperforming loans do not include loans accounted for under the fair value option. During the three months ended March 31, 2019, nonperforming commercial loans and leases increased \$170 million to \$1.3 billion. At March 31, 2019, 93 percent of commercial nonperforming loans, leases and foreclosed properties were secured and 61 percent were contractually current. Commercial nonperforming loans were carried at 93 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 collateral value less costs to sell.

Table 33 Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity (1, 2)

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Nonperforming loans and leases, January 1	\$ 1,102	\$ 1,304
Additions	640	436
Reductions:		
Paydowns	(108)	(169)
Sales	(43)	(24)
Returns to performing status (3)	(34)	(27)
Charge-offs	(97)	(48)
Transfers to foreclosed properties	(7)	—
Transfers to loans held-for-sale	(181)	—
Total net reductions to nonperforming loans and leases	170	168
Total nonperforming loans and leases, March 31	1,272	1,472
Foreclosed properties, March 31	59	52
Nonperforming commercial loans, leases and foreclosed properties, March 31	\$ 1,331	\$ 1,524
Nonperforming commercial loans and leases as a percentage of outstanding commercial loans and leases (4)	0.26%	0.31%
Nonperforming commercial loans, leases and foreclosed properties as a percentage of outstanding commercial loans, leases and foreclosed properties (4)	0.27	0.32

(1) Balances do not include nonperforming loans held-for-sale of \$457 million and \$228 million at March 31, 2019 and 2018.

(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) Outstanding commercial loans exclude loans accounted for under the fair value option.

Table 34 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 5 – *Outstanding Loans and Leases* to the Consolidated Financial Statements.

Table 34 Commercial Troubled Debt Restructurings

(Dollars in millions)	March 31, 2019			December 31, 2018		
	Nonperforming	Performing	Total	Nonperforming	Performing	Total
Commercial and industrial:						
U.S. commercial	\$ 375	\$ 1,125	\$ 1,500	\$ 306	\$ 1,092	\$ 1,398
Non-U.S. commercial	77	253	330	78	162	240
Total commercial and industrial	452	1,378	1,830	384	1,254	1,638
Commercial real estate	112	92	204	114	6	120
Commercial lease financing	32	35	67	3	68	71
	596	1,505	2,101	501	1,328	1,829
U.S. small business commercial	3	19	22	3	18	21
Total commercial troubled debt restructurings	\$ 599	\$ 1,524	\$ 2,123	\$ 504	\$ 1,346	\$ 1,850

Industry Concentrations

Table 35 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 decreased \$5.5 billion, or one percent, during the three months ended March 31, 2019 to \$1.0 trillion. The decrease in commercial committed exposure was concentrated in the Pharmaceuticals and Biotechnology, Asset Managers and Funds and Insurance industry sectors. Decreases were partially offset by increased exposure to the Utilities, Global Commercial Banks, and Telecommunications Services industry 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.

Asset Managers and Funds, our largest industry concentration with committed exposure of \$104.8 billion, decreased \$3.0 billion, or three percent, during the three months ended March 31, 2019. The change reflects a decrease in exposure to several counterparties.

Real Estate, our second largest industry concentration with committed exposure of \$87.5 billion, increased \$1.0 billion, or one percent, during the three months ended March 31, 2019. For more information on the commercial real estate and related portfolios, see Commercial Portfolio Credit Risk Management – Commercial Real Estate on page 31.

Capital Goods, our third largest industry concentration with committed exposure of \$73.7 billion, decreased \$1.4 billion, or two percent, during the three months ended March 31, 2019. The decrease in committed exposure occurred primarily as a result of decreases in large conglomerates and aerospace and defense companies, partially offset by increases in trading companies and distributors.

Table 35 Commercial Credit Exposure by Industry (1)

	Commercial Utilized		Total Commercial Committed (2)	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)				
Asset managers and funds	\$ 67,300	\$ 71,756	\$ 104,843	\$ 107,888
Real estate (3)	66,568	65,328	87,529	86,514
Capital goods	38,628	39,192	73,686	75,080
Finance companies	36,432	36,662	57,199	56,659
Healthcare equipment and services	36,095	35,763	56,488	56,489
Government and public education	42,950	43,675	54,321	54,749
Materials	28,203	27,347	52,286	51,865
Retailing	25,943	25,333	45,945	47,507
Food, beverage and tobacco	23,978	23,586	43,153	42,745
Consumer services	25,514	25,702	42,788	43,298
Commercial services and supplies	21,549	22,623	38,768	39,349
Energy	14,643	13,727	32,842	32,279
Transportation	23,519	22,814	32,099	31,523
Global commercial banks	28,262	26,269	30,535	28,321
Utilities	12,208	12,035	30,146	27,623
Individuals and trusts	18,628	18,643	25,159	25,019
Technology hardware and equipment	11,514	13,014	24,398	26,228
Media	11,676	12,132	23,641	24,502
Vehicle dealers	18,100	17,603	21,168	20,446
Software and services	9,658	8,809	20,727	19,172
Pharmaceuticals and biotechnology	6,638	7,430	18,660	23,634
Consumer durables and apparel	9,870	9,904	18,625	20,199
Telecommunication services	8,695	8,686	16,158	14,166
Automobiles and components	7,632	7,131	14,143	13,893
Insurance	5,841	8,674	13,834	15,807
Food and staples retailing	5,982	4,787	9,733	9,093
Religious and social organizations	4,061	3,757	6,077	5,620
Financial markets infrastructure (clearinghouses)	1,776	2,382	3,491	4,107
Other	6,067	6,249	6,067	6,241
Total commercial credit exposure by industry	\$ 617,930	\$ 621,013	\$ 1,004,509	\$ 1,010,016
Net credit default protection purchased on total commitments (4)			\$ (2,647)	\$ (2,663)

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

(2) Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (i.e., syndicated or participated) to other financial institutions. The distributed amounts were \$10.4 billion and \$10.7 billion at March 31, 2019 and December 31, 2018.

(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 primary business activity of the borrowers or counterparties 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.

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 March 31, 2019 and December 31, 2018, 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 \$2.6 billion and \$2.7 billion. We recorded net losses on these positions of \$65 million and \$9 million for the three months ended March 31, 2019 and 2018. 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 41. For additional information, see Trading Risk Management on page 37.

Tables 36 and 37 present the maturity profiles and the credit exposure debt ratings of the net credit default protection portfolio at March 31, 2019 and December 31, 2018.

Table 36 Net Credit Default Protection by Maturity

	March 31 2019	December 31 2018
Less than or equal to one year	29%	20%
Greater than one year and less than or equal to five years	54	78
Greater than five years	17	2
Total net credit default protection	100%	100%

Table 37 Net Credit Default Protection by Credit Exposure Debt Rating

	Net Notional (1)	Percent of Total	Net Notional (1)	Percent of Total
	March 31, 2019		December 31, 2018	
(Dollars in millions)				
Ratings (2, 3)				
A	\$ (525)	19.8%	\$ (700)	26.3%
BBB	(448)	16.9	(501)	18.8
BB	(630)	23.8	(804)	30.2
B	(543)	20.5	(422)	15.8
CCC and below	(146)	5.5	(205)	7.7
NR (4)	(355)	13.5	(31)	1.2
Total net credit default protection	\$ (2,647)	100.0%	\$ (2,663)	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.

For more information on credit derivatives and counterparty credit risk valuation adjustments, see *Note 3 – Derivatives* to the Consolidated Financial Statements herein and *Note 3 – Derivatives* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

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 38 presents our 20 largest non-U.S. country exposures at March 31, 2019. These exposures accounted for 89 percent of our total non-U.S. exposure at both March 31, 2019 and December 31, 2018. Net country exposure for these 20 countries increased \$4.9 billion in the three months ended March 31, 2019, primarily driven by increased corporate exposure across multiple countries.

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. 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 credit default swaps, 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. Net country exposure represents country exposure less hedges and credit default protection purchased, net of credit default protection sold.

Table 38 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 March 31, 2019	Hedges and Credit Default Protection	Net Country Exposure at March 31, 2019	Increase (Decrease) from December 31, 2018
United Kingdom	\$ 33,105	\$ 16,444	\$ 7,001	\$ 1,681	\$ 58,231	\$ (4,491)	\$ 53,740	\$ (1,114)
Germany	23,747	10,421	2,167	955	37,290	(3,338)	33,952	5,295
Japan	17,976	816	1,693	940	21,425	(1,298)	20,127	104
Canada	7,453	7,012	1,304	2,286	18,055	(821)	17,234	(2,281)
China	11,692	770	714	1,276	14,452	(265)	14,187	(454)
France	7,262	5,673	1,246	2,310	16,491	(3,800)	12,691	40
India	7,725	363	422	4,049	12,559	(166)	12,393	1,281
Brazil	7,071	589	203	4,065	11,928	(291)	11,637	1,388
Australia	6,467	3,605	329	1,435	11,836	(409)	11,427	1,497
South Korea	5,690	588	765	1,994	9,037	(217)	8,820	(350)
Netherlands	6,708	2,611	468	392	10,179	(1,549)	8,630	(2,947)
Switzerland	4,933	3,359	307	136	8,735	(1,160)	7,575	(189)
Hong Kong	5,598	268	446	1,227	7,539	(39)	7,500	264
Mexico	4,028	1,319	100	1,079	6,526	(174)	6,352	116
Belgium	4,784	1,008	110	650	6,552	(328)	6,224	646
Singapore	3,373	160	142	2,333	6,008	(57)	5,951	434
Spain	3,968	1,325	141	765	6,199	(1,583)	4,616	(34)
Italy	2,389	1,511	505	774	5,179	(1,512)	3,667	586
United Arab Emirates	3,247	257	98	118	3,720	(53)	3,667	18
Ireland	1,475	1,079	90	129	2,773	(62)	2,711	550
Total top 20 non-U.S. countries exposure	\$ 168,691	\$ 59,178	\$ 18,251	\$ 28,594	\$ 274,714	\$ (21,613)	\$ 253,101	\$ 4,850

A number of economic conditions and geopolitical events have given rise to risk aversion in certain emerging markets. Our largest emerging market country exposure at March 31, 2019 was China, with net exposure of \$14.2 billion, concentrated in large state-owned companies, subsidiaries of multinational corporations and commercial banks.

The outlook for policy direction and therefore economic performance in the EU remains uncertain as a consequence of reduced political cohesion among EU countries. Additionally, we believe that the uncertainty in the U.K.'s ability to negotiate a favorable exit from the EU will further weigh on economic performance. For additional information, see Executive Summary.

– Recent Developments – U.K. Exit from the EU on page 3. Our largest EU country exposure at March 31, 2019 was the U.K. with net exposure of \$53.7 billion, which represents a \$1.1 billion decrease from December 31, 2018, primarily driven by a reduction in corporate exposure.

We continue to closely monitor our exposures to tariff-sensitive industries and our international exposure, particularly to countries that account for a large percentage of U.S. trade, in light of ongoing trade tensions.

Provision for Credit Losses

The provision for credit losses increased \$179 million to \$1.0 billion for the three months ended March 31, 2019 compared to the same period in 2018. The provision for credit losses was \$22 million higher than net charge-offs for the three months ended March 31, 2019, resulting in an increase in the allowance for credit losses. This compared to a reduction of \$77 million in the allowance for credit losses for the three months ended March 31, 2018.

Net charge-offs for the three months ended March 31, 2019 were \$991 million compared to \$911 million for the same period in 2018. We expect net charge-offs for each of the remaining quarters in 2019 to approximate this quarter's net charge-offs, assuming current economic conditions continue.

The provision for credit losses for the consumer portfolio increased \$82 million to \$830 million for the three months ended March 31, 2019 compared to the same period in 2018. The increase was primarily driven by a slower pace of portfolio improvement in the consumer real estate portfolio, and seasoning in the U.S. credit card portfolio.

The provision for credit losses for the commercial portfolio, including unfunded lending commitments, increased \$97 million to \$183 million for the three months ended March 31, 2019 compared to the same period in 2018. The increase was primarily driven by a single-name utility client charge-off and energy reserve releases in the prior-year period.

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, which includes both quantitative and qualitative factors. 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 loans held-for-sale (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 2018 Annual Report on Form 10-K.

During the three months ended March 31, 2019, the factors that impacted the allowance for loan and lease losses included improvement in the credit quality of the consumer real estate portfolios driven by continuing improvements in the U.S. economy and strong labor markets, proactive credit risk management initiatives and the impact of high credit quality originations. Evidencing the improvements in the U.S. economy and strong labor markets are low levels of unemployment and increases in home prices. In addition to these improvements, in the consumer portfolio, nonperforming consumer loans decreased \$264 million during the three months ended March 31, 2019 as returns to performing status, paydowns, charge-offs and loan sales continued to outpace new nonaccrual loans.

The allowance for loan and lease losses for the consumer portfolio, as presented in Table 40, was \$4.8 billion at March 31, 2019, a decrease of \$46 million from December 31, 2018. The decrease was primarily in the consumer real estate portfolio, partially offset by an increase in the U.S. credit card portfolio. The reduction in the allowance for the consumer real estate portfolio was due to improved home prices, lower nonperforming loans and a decrease in loan balances in our non-core portfolio. The increase in the allowance for the U.S. credit card portfolio was driven by portfolio seasoning.

The allowance for loan and lease losses for the commercial portfolio, as presented in Table 40, was \$4.8 billion at March 31, 2019, an increase of \$22 million from December 31, 2018. Commercial reservable criticized utilized exposure increased to \$11.8 billion at March 31, 2019 from \$11.1 billion (to 2.22 percent from 2.08 percent of total commercial reservable utilized exposure) at December 31, 2018, and nonperforming commercial loans increased to \$1.3 billion at March 31, 2019 from \$1.1 billion (to 0.26 percent from 0.22 percent of outstanding commercial loans excluding loans accounted for under the fair value option) at December 31, 2018 with the increases spread across multiple industries. See Tables 29, 30 and 31 for more details on key commercial credit statistics.

The allowance for loan and lease losses as a percentage of total loans and leases outstanding was 1.02 percent at both March 31, 2019 and December 31, 2018.

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 2018 Annual Report on Form 10-K.

The reserve for unfunded lending commitments was \$802 million at March 31, 2019 compared to \$797 million at December 31, 2018.

Table 39 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 months ended March 31, 2019 and 2018.

Table 39 Allowance for Credit Losses

	Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Allowance for loan and lease losses, January 1	\$ 9,601	\$ 10,393
Loans and leases charged off		
Residential mortgage	(24)	(56)
Home equity	(79)	(118)
U.S. credit card	(887)	(824)
Direct/Indirect consumer	(124)	(133)
Other consumer	(46)	(49)
Total consumer charge-offs	(1,160)	(1,180)
U.S. commercial (1)	(170)	(108)
Non-U.S. commercial	—	(7)
Commercial real estate	(5)	—
Commercial lease financing	(2)	(1)
Total commercial charge-offs	(177)	(116)
Total loans and leases charged off	(1,337)	(1,296)
Recoveries of loans and leases previously charged off		
Residential mortgage	40	62
Home equity	68	85
U.S. credit card	142	123
Direct/Indirect consumer	70	74
Other consumer	5	6
Total consumer recoveries	325	350
U.S. commercial (2)	19	27
Non-U.S. commercial	—	3
Commercial real estate	—	3
Commercial lease financing	2	2
Total commercial recoveries	21	35
Total recoveries of loans and leases previously charged off	346	385
Net charge-offs	(991)	(911)
Provision for loan and lease losses	1,008	829
Other (3)	(41)	(51)
Allowance for loan and lease losses, March 31	9,577	10,260
Reserve for unfunded lending commitments, January 1	797	777
Provision for unfunded lending commitments	5	5
Reserve for unfunded lending commitments, March 31	802	782
Allowance for credit losses, March 31	\$ 10,379	\$ 11,042

Loan and allowance ratios:

Loans and leases outstanding at March 31 (4)	\$ 939,428	\$ 928,089
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at March 31 (4)	1.02%	1.11%
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at March 31 (5)	1.08	1.18
Commercial allowance for loan and lease losses as a percentage of total commercial loans and leases outstanding at March 31 (6)	0.97	1.04
Average loans and leases outstanding (4)	\$ 939,008	\$ 926,297
Annualized net charge-offs as a percentage of average loans and leases outstanding (4)	0.43%	0.40%
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at March 31 (4)	197	161
Ratio of the allowance for loan and lease losses at March 31 to annualized net charge-offs	2.38	2.78
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at March 31 (7)	\$ 4,106	\$ 3,992
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 March 31 (4, 7)	113%	98%

(1) Includes U.S. small business commercial charge-offs of \$79 million and \$68 million for the three months ended March 31, 2019 and 2018.

(2) Includes U.S. small business commercial recoveries of \$1.1 million for both the three months ended March 31, 2019 and 2018.

(3) Primarily represents write-offs of purchased credit-impaired (PCI) loans, the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments, transfers to held for sale, and certain other reclassifications.

(4) Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of \$6.2 billion and \$6.0 billion at March 31, 2019 and 2018. Average loans accounted for under the fair value option were \$5.0 billion and \$5.6 billion at March 31, 2019 and 2018.

(5) Excludes consumer loans accounted for under the fair value option of \$668 million and \$894 million at March 31, 2019 and 2018.

(6) Excludes commercial loans accounted for under the fair value option of \$5.5 billion and \$5.1 billion at March 31, 2019 and 2018.

(7) Primarily includes amounts allocated to U.S. credit card and unsecured consumer lending portfolios in Consumer Banking and PCI loans in All Other.

Table 40 Allocation of the Allowance for Credit Losses by Product Type

			Percent of Loans and Leases Outstanding (1)			Percent of Loans and Leases Outstanding(1)
	Amount	Percent of Total		Amount	Percent of Total	
(Dollars in millions)	March 31, 2019			December 31, 2018		
Allowance for loan and lease losses						
Residential mortgage	\$ 379	3.96%	0.18%	\$ 422	4.40%	0.20%
Home equity	443	4.63	0.96	506	5.27	1.05
U.S. credit card	3,666	38.27	3.94	3,597	37.47	3.66
Direct/Indirect consumer	238	2.49	0.27	248	2.58	0.27
Other consumer	30	0.31	n/m	29	0.30	n/m
Total consumer	4,756	49.66	1.08	4,802	50.02	1.08
U.S. commercial (2)	2,997	31.29	0.95	3,010	31.35	0.96
Non-U.S. commercial	705	7.36	0.70	677	7.05	0.69
Commercial real estate	965	10.08	1.58	958	9.98	1.57
Commercial lease financing	154	1.61	0.73	154	1.60	0.68
Total commercial	4,821	50.34	0.97	4,799	49.98	0.97
Allowance for loan and lease losses	9,577	100.00%	1.02	9,601	100.00%	1.02
Reserve for unfunded lending commitments	802			797		
Allowance for credit losses	\$ 10,379			\$ 10,398		

(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 include residential mortgage loans of \$315 million and \$336 million and home equity loans of \$353 million and \$346 million at March 31, 2019 and December 31, 2018. Commercial loans accounted for under the fair value option include U.S. commercial loans of \$2.8 billion and \$2.5 billion and non-U.S. commercial loans of \$2.7 billion and \$1.1 billion at March 31, 2019 and December 31, 2018.

(2) Includes allowance for loan and lease losses for U.S. small business commercial loans of \$489 million and \$474 million at March 31, 2019 and December 31, 2018.

n/m = not meaningful

Market Risk Management

For more information on our market risk management process, see Market Risk Management in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

Trading Risk Management

To evaluate risk in our trading activities, we focus on the actual and potential volatility of revenues generated by individual positions as well as portfolios of positions.

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 2018 Annual Report on Form 10-K.

Table 41 presents the total market-based portfolio VaR which is the combination of the total covered positions (and less liquid trading positions) portfolio and the fair value option portfolio. For more information on the market risk VaR trading activities, see Trading Risk Management in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

The total market-based portfolio VaR results in Table 41 include market risk to which we are exposed from all business segments, excluding credit valuation adjustment (CVA), DVA and related hedges. The majority of this portfolio is within the *Global Markets* segment.

Table 41 presents period-end, average, high and low daily trading VaR for the three months ended March 31, 2019, December 31, 2018 and March 31, 2018 using a 99 percent confidence level. The amounts disclosed in Table 41 and Table 42 align to the view of covered positions used in the Basel 3 capital calculations. Foreign exchange and commodity positions are always considered covered positions, regardless of trading or banking treatment for the trade, except for structural foreign currency positions that are excluded with prior regulatory approval.

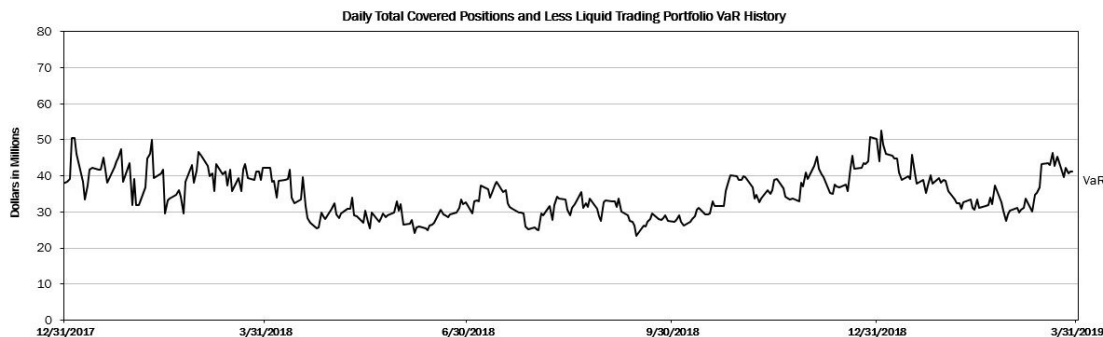
The average total covered positions and less liquid trading positions portfolio VaR increased modestly for the three months ended March 31, 2019 compared to the previous quarter primarily due to a decrease in portfolio diversification from changes in the equity risk profile in the portfolio.

Table 41 Market Risk VaR for Trading Activities

(Dollars in millions)	Three Months Ended											
	March 31, 2019				December 31, 2018				March 31, 2018			
	Period End	Average	High ⁽¹⁾	Low ⁽¹⁾	Period End	Average	High ⁽¹⁾	Low ⁽¹⁾	Period End	Average	High ⁽¹⁾	Low ⁽¹⁾
Foreign exchange	\$ 8	\$ 6	\$ 10	\$ 4	\$ 9	\$ 7	\$ 13	\$ 3	\$ 8	\$ 8	\$ 12	\$ 6
Interest rate	38	28	49	17	36	28	45	18	33	23	33	18
Credit	21	21	26	18	26	25	29	23	28	27	31	23
Equity	26	19	26	14	20	25	40	15	16	19	28	14
Commodities	5	7	13	4	13	9	15	6	10	6	12	3
Portfolio diversification	(61)	(48)	—	—	(59)	(60)	—	—	(57)	(49)	—	—
Total covered positions portfolio	37	33	47	25	45	34	45	26	38	34	43	25
Impact from less liquid exposures	4	4	—	—	5	2	—	—	4	6	—	—
Total covered positions and less liquid trading positions portfolio	41	37	53	28	50	36	51	26	42	40	51	29
Fair value option loans	7	8	10	7	8	9	12	8	12	10	12	8
Fair value option hedges	4	10	17	4	5	6	7	4	9	8	10	6
Fair value option portfolio diversification	(6)	(9)	—	—	(7)	(9)	—	—	(11)	(9)	—	—
Total fair value option portfolio	5	9	16	5	6	6	8	5	10	9	10	7
Portfolio diversification	(4)	(6)	—	—	(3)	(4)	—	—	(3)	(4)	—	—
Total market-based portfolio	\$ 42	\$ 40	56	30	\$ 53	\$ 38	54	28	\$ 49	\$ 45	57	33

⁽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 covered positions and less liquid trading positions portfolio VaR for the previous five quarters, corresponding to the data in Table 41.



Additional VaR statistics produced within our single VaR model are provided in Table 42 at the same level of detail as in Table 41. 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 42 presents average trading VaR statistics at 99 percent and 95 percent confidence levels for the three months ended March 31, 2019, December 31, 2018 and March 31, 2018.

Table 42 Average Market Risk VaR for Trading Activities – 99 percent and 95 percent VaR Statistics

(Dollars in millions)	Three Months Ended					
	March 31, 2019		December 31, 2018		March 31, 2018	
	99 percent	95 percent	99 percent	95 percent	99 percent	95 percent
Foreign exchange	\$ 6	\$ 3	\$ 7	\$ 4	\$ 8	\$ 5
Interest rate	28	18	28	17	23	15
Credit	21	14	25	16	27	16
Equity	19	10	25	14	19	10
Commodities	7	4	9	5	6	3
Portfolio diversification	(48)	(30)	(60)	(35)	(49)	(30)
Total covered positions portfolio	33	19	34	21	34	19
Impact from less liquid exposures	4	2	2	1	6	2
Total covered positions and less liquid trading positions portfolio	37	21	36	22	40	21
Fair value option loans	8	4	9	5	10	5
Fair value option hedges	10	6	6	4	8	6
Fair value option portfolio diversification	(9)	(4)	(9)	(6)	(9)	(6)
Total fair value option portfolio	9	6	6	3	9	5
Portfolio diversification	(6)	(5)	(4)	(2)	(4)	(3)
Total market-based portfolio	\$ 40	\$ 22	\$ 38	\$ 23	\$ 45	\$ 23

Backtesting

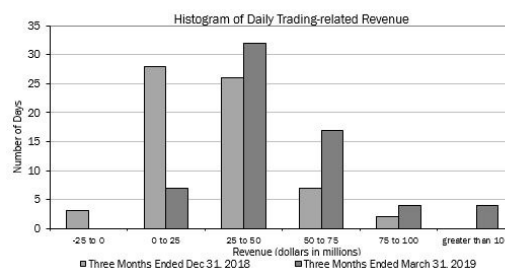
The accuracy of the VaR methodology is evaluated by backtesting, which compares the daily VaR results, utilizing a one-day holding period, against a comparable subset of trading revenue. A backtesting excess occurs when a trading loss exceeds the VaR for the corresponding day. These excesses are evaluated to understand the positions and market moves that produced the trading loss with a goal of ensuring 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 2018 Annual Report on Form 10-K.

During the three months ended March 31, 2019, there were no days in which there was a backtesting excess for our total covered 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 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 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K. 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 March 31, 2019 compared to the three months ended December 31, 2018. During the three months ended March 31, 2019, positive trading-related revenue was recorded for 100 percent of the trading days, of which 89 percent were daily trading gains of over \$25 million. This compares to the three months ended December 31, 2018 where positive trading-related revenue was recorded for 95 percent of the trading days, of which 53 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 2018 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 43 presents the spot and 12-month forward rates used in our baseline forecasts at March 31, 2019 and December 31, 2018.

Table 43 Forward Rates

	March 31, 2019		
	Federal Funds	Three-month LIBOR	10-Year Swap
Spot rates	2.50%	2.60%	2.41%
12-month forward rates	2.25	2.31	2.43
December 31, 2018			
Spot rates	2.50%	2.81%	2.71%
12-month forward rates	2.50	2.64	2.75

Table 44 shows the pretax impact to forecasted net interest income over the next 12 months from March 31, 2019 and December 31, 2018, 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 three months ended March 31, 2019, the asset sensitivity of our balance sheet to rising rates increased primarily due to decreases in interest rates. We continue to be asset sensitive to a parallel move in interest rates with the majority of that impact coming from the short end of the yield curve. Additionally, higher interest rates impact the fair value of debt securities and, accordingly, for debt securities classified as AFS, may adversely affect accumulated OCI and thus capital levels under the Basel 3 capital rules. Under instantaneous upward parallel shifts, the near-term adverse impact to Basel 3 capital is reduced over time by offsetting positive impacts to net interest income. For more information on Basel 3, see Capital Management – Regulatory Capital on page 17.

Table 44 Estimated Banking Book Net Interest Income Sensitivity to Curve Changes

(Dollars in millions)	Short Rate (bps)	Long Rate (bps)	March 31 2019	December 31 2018
Parallel Shifts				
+100 bps				
instantaneous shift	+100	+100	\$ 3,673	\$ 2,833
-100 bps				
instantaneous shift	-100	-100	(5,285)	(4,280)
Flatteners				
Short-end				
instantaneous change	+100	—	2,652	2,158
Long-end				
instantaneous change	—	-100	(2,243)	(1,618)
Steeperers				
Short-end				
instantaneous change	-100	—	(3,019)	(2,648)
Long-end				
instantaneous change	—	+100	1,026	675

The sensitivity analysis in Table 44 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 44 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 3 – Derivatives to the Consolidated Financial Statements. For more information on interest rate contracts and risk management, see Interest Rate Risk Management for the Banking Book in the MD&A of the Corporation's 2018 Annual Report on Form 10-K.

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 \$1.0 billion and \$1.3 billion, on a pretax basis, at March 31, 2019 and December 31, 2018. 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 March 31, 2019, the pretax net losses are expected to be reclassified into earnings as follows: 25 percent within the next year, 53 percent in years two through five and 12 percent in years six through ten, with the remaining 10 percent thereafter. For more information on derivatives designated as cash flow hedges, see Note 3 – 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 March 31, 2019.

Table 45 presents derivatives utilized in our ALM activities 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 March 31, 2019 and December 31, 2018. These amounts do not include derivative hedges on our MSRs. During the three months ended March 31, 2019, the fair value of receive-fixed interest rate swaps increased while pay-fixed interest rates swaps decreased, driven by lower swap rates.

Table 45 Asset and Liability Management Interest Rate and Foreign Exchange Contracts

	March 31, 2019								
		Expected Maturity							
	Fair Value	Total	Remainder of 2019	2020	2021	2022	2023	Thereafter	Average Estimated Duration
(Dollars in millions, average estimated duration in years)									
Receive-fixed interest rate swaps (1)	\$ 5,878								5.74
Notional amount		\$ 214,062	\$ 21,298	\$ 16,347	\$ 14,640	\$ 20,366	\$ 35,706	\$ 105,705	
Weighted-average fixed-rate		2.70%	1.88%	2.68%	3.17%	2.56%	2.37%	2.94%	
Pay-fixed interest rate swaps (1)	(883)								6.21
Notional amount		\$ 60,157	\$ 1,217	\$ 4,344	\$ 1,616	\$ —	\$ 13,343	\$ 39,637	
Weighted-average fixed-rate		2.51%	2.07%	2.16%	2.22%	—%	2.57%	2.56%	
Same-currency basis swaps (2)	26								
Notional amount		\$ 126,620	\$ 7,141	\$ 15,057	\$ 17,992	\$ 4,296	\$ 2,017	\$ 80,117	
Foreign exchange basis swaps (1, 3, 4)	(1,081)								
Notional amount		109,167	13,986	21,869	19,115	11,382	6,597	36,218	
Option products	4								
Notional amount		666	651	—	—	—	15	—	
Foreign exchange contracts (1, 4, 5)	1,029								
Notional amount (6)		(75,189)	(94,291)	(561)	3,985	2,670	2,370	10,638	
Futures and forward rate contracts	3								
Notional amount (6)		—	—	—	—	—	—	—	
Net ALM contracts	\$ 4,976								

	December 31, 2018								
		Expected Maturity							
	Fair Value	Total	2019	2020	2021	2022	2023	Thereafter	Average Estimated Duration
(Dollars in millions, average estimated duration in years)									
Receive-fixed interest rate swaps (1)	\$ 2,128								5.17
Notional amount		\$ 198,914	\$ 27,176	\$ 16,347	\$ 14,640	\$ 19,866	\$ 36,215	\$ 84,670	
Weighted-average fixed-rate		2.66%	1.87%	2.68%	3.17%	2.56%	2.37%	2.97%	
Pay-fixed interest rate swaps (1)	295								6.30
Notional amount		\$ 49,275	\$ 1,210	\$ 4,344	\$ 1,616	\$ —	\$ 10,801	\$ 31,304	
Weighted-average fixed-rate		2.50%	2.07%	2.16%	2.22%	—%	2.59%	2.55%	
Same-currency basis swaps (2)	21								
Notional amount		\$ 101,203	\$ 7,628	\$ 15,097	\$ 15,493	\$ 2,586	\$ 2,017	\$ 58,382	
Foreign exchange basis swaps (1, 3, 4)	(1,716)								
Notional amount		106,742	13,946	21,448	19,241	10,239	6,260	35,608	
Option products	2								
Notional amount		587	572	—	—	—	15	—	
Foreign exchange contracts (1, 4, 5)	82								
Notional amount (6)		(8,447)	(27,823)	13	4,196	2,741	2,448	9,978	
Net ALM contracts	\$ 812								

(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 March 31, 2019 and December 31, 2018, the notional amount of same-currency basis swaps included \$126.6 billion and \$101.2 billion in both foreign currency and U.S. dollar-denominated basis swaps in which both sides of the swap are in the same currency.

(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 foreign exchange contracts of \$(75.2) billion at March 31, 2019 was comprised of \$24.4 billion in foreign currency-denominated and cross-currency receive-fixed swaps, \$(98.5) billion in net foreign currency forward rate contracts, \$(1.9) billion in foreign currency-denominated pay-fixed swaps and \$82.1 million in net foreign currency futures contracts. Foreign exchange contracts of \$(8.4) billion at December 31, 2018 were comprised of \$25.2 billion in foreign currency-denominated and cross-currency receive-fixed swaps, \$(32.7) billion in net foreign currency forward rate contracts, \$(1.8) billion in foreign currency-denominated pay-fixed swaps and \$81.4 million in foreign currency futures contracts.

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

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 interest rate lock commitments (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, when there is an increase in interest rates, the value of the MSRs will increase driven by lower prepayment expectations. 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.

During the three months ended March 31, 2019 and 2018, we recorded gains of \$61 million and \$69 million related to the change in fair value of the MSRs, IRLCs and LHFS, net of gains and losses on the hedge portfolio. For more information on MSRs, see Note 15 – Fair Value Measurements to the Consolidated Financial Statements.

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 in the MD&A of the Corporation's 2018 Annual Report on Form 10-K and Note 1 – *Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Non-GAAP Reconciliations

Table 46 provides reconciliations of certain non-GAAP financial measures to GAAP financial measures.

Table 46 Period-end and Average Supplemental Financial Data and Reconciliations to GAAP Financial Measures (1)

	Period-end		Average	
	March 31 2019	December 31 2018	Three Months Ended March 31	
			2019	2018
(Dollars in millions)				
Shareholders' equity	\$ 267,010	\$ 265,325	\$ 266,217	\$ 265,480
Goodwill	(68,951)	(68,951)	(68,951)	(68,951)
Intangible assets (excluding MSRs)	(1,747)	(1,774)	(1,763)	(2,261)
Related deferred tax liabilities	773	858	841	939
Tangible shareholders' equity	\$ 197,085	\$ 195,458	\$ 196,344	\$ 195,207
Preferred stock	(22,326)	(22,326)	(22,326)	(22,767)
Tangible common shareholders' equity	\$ 174,759	\$ 173,132	\$ 174,018	\$ 172,440
Total assets	\$ 2,377,164	\$ 2,354,507		
Goodwill	(68,951)	(68,951)		
Intangible assets (excluding MSRs)	(1,747)	(1,774)		
Related deferred tax liabilities	773	858		
Tangible assets	\$ 2,307,239	\$ 2,284,640		

(1) Presents reconciliations of non-GAAP financial measures to GAAP financial measures. For more information on non-GAAP financial measures and ratios we use in assessing the results of the Corporation, see Supplemental Financial Data on page 5.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

See Market Risk Management on page 37 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.

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 March 31, 2019, 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 March 31	
	2019	2018
(In millions, except per share information)		
Net interest income		
Interest income	\$ 18,170	\$ 15,599
Interest expense	5,795	3,830
Net interest income	12,375	11,769
Noninterest income		
Fees and commissions	7,838	8,340
Trading account income	2,338	2,553
Other income	453	408
Total noninterest income	10,629	11,301
Total revenue, net of interest expense	23,004	23,070
Provision for credit losses	1,013	834
Noninterest expense		
Compensation and benefits	8,249	8,480
Occupancy and equipment	1,605	1,607
Information processing and communications	1,164	1,165
Product delivery and transaction related	662	756
Marketing	442	345
Professional fees	360	381
Other general operating	742	1,108
Total noninterest expense	13,224	13,842
Income before income taxes	8,767	8,394
Income tax expense	1,456	1,476
Net income	\$ 7,311	\$ 6,918
Preferred stock dividends	442	428
Net income applicable to common shareholders	\$ 6,869	\$ 6,490
Per common share information		
Earnings	\$ 0.71	\$ 0.63
Diluted earnings	0.70	0.62
Average common shares issued and outstanding	9,725.9	10,322.4
Average diluted common shares issued and outstanding	9,787.3	10,472.7

Consolidated Statement of Comprehensive Income

	Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Net income	\$ 7,311	\$ 6,918
Other comprehensive income (loss), net-of-tax:		
Net change in debt and equity securities	2,309	(3,963)
Net change in debt valuation adjustments	(363)	273
Net change in derivatives	229	(275)
Employee benefit plan adjustments	28	30
Net change in foreign currency translation adjustments	(34)	(48)
Other comprehensive income (loss)	2,169	(3,983)
Comprehensive income	\$ 9,480	\$ 2,935

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Balance Sheet

	March 31 2019	December 31 2018
(Dollars in millions)		
Assets		
Cash and due from banks	\$ 28,083	\$ 29,063
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	143,540	148,341
Cash and cash equivalents	171,623	177,404
Time deposits placed and other short-term investments	9,480	7,494
Federal funds sold and securities borrowed or purchased under agreements to resell (includes \$59,557 and \$56,399 measured at fair value)	267,017	261,131
Trading account assets (includes \$121,983 and \$119,363 pledged as collateral)	239,062	214,348
Derivative assets	42,391	43,725
Debt securities:		
Carried at fair value	241,956	238,101
Held-to-maturity, at cost (fair value – \$198,530 and \$200,435)	198,718	203,652
Total debt securities	440,674	441,753
Loans and leases (includes \$6,187 and \$4,349 measured at fair value)	945,615	946,895
Allowance for loan and lease losses	(9,577)	(9,601)
Loans and leases, net of allowance	936,038	937,294
Premises and equipment, net	10,251	9,906
Goodwill	68,951	68,951
Loans held-for-sale (includes \$2,547 and \$2,942 measured at fair value)	6,297	10,367
Customer and other receivables	53,496	65,814
Other assets (includes \$22,929 and \$19,739 measured at fair value)	131,884	116,320
Total assets	\$ 2,377,164	\$ 2,354,507
Liabilities		
Deposits in U.S. offices:		
Noninterest-bearing	\$ 395,350	\$ 412,587
Interest-bearing (includes \$499 and \$492 measured at fair value)	907,076	891,636
Deposits in non-U.S. offices:		
Noninterest-bearing	12,066	14,060
Interest-bearing	64,845	63,193
Total deposits	1,379,337	1,381,476
Federal funds purchased and securities loaned or sold under agreements to repurchase (includes \$26,609 and \$28,875 measured at fair value)	188,451	186,988
Trading account liabilities	84,410	68,220
Derivative liabilities	36,338	37,891
Short-term borrowings (includes \$1,895 and \$1,648 measured at fair value)	14,008	20,189
Accrued expenses and other liabilities (includes \$23,373 and \$20,075 measured at fair value and \$802 and \$797 of reserve for unfunded lending commitments)	173,681	165,026
Long-term debt (includes \$31,625 and \$27,689 measured at fair value)	233,929	229,392
Total liabilities	2,110,154	2,089,182
Commitments and contingencies (Note 7 – Securitizations and Other Variable Interest Entities and Note 11 – Commitments and Contingencies)		
Shareholders' equity		
Preferred stock, \$0.01 par value; authorized – 100,000,000 shares; issued and outstanding – 3,843,140 and 3,843,140 shares	22,326	22,326
Common stock and additional paid-in capital, \$0.01 par value; authorized – 12,800,000,000 shares; issued and outstanding – 9,568,389,268 and 9,669,286,370 shares	112,838	118,896
Retained earnings	141,888	136,314
Accumulated other comprehensive income (loss)	(10,042)	(12,211)
Total shareholders' equity	267,010	265,325
Total liabilities and shareholders' equity	\$ 2,377,164	\$ 2,354,507
Assets of consolidated variable interest entities included in total assets above (isolated to settle the liabilities of the variable interest entities)		
Trading account assets	\$ 5,453	\$ 5,798
Loans and leases	41,528	43,850
Allowance for loan and lease losses	(884)	(912)
Loans and leases, net of allowance	40,644	42,938
All other assets	332	337

Total assets of consolidated variable interest entities	\$	46,429	\$	49,073
Liabilities of consolidated variable interest entities included in total liabilities above				
Short-term borrowings	\$	1,547	\$	742
Long-term debt (includes \$8,181 and \$10,943 of non-recourse debt)		8,182		10,944
All other liabilities (includes \$22 and \$27 of non-recourse liabilities)		25		30
Total liabilities of consolidated variable interest entities	\$	9,754	\$	11,716

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Changes in Shareholders' Equity

(In millions)	Preferred Stock	Common Stock and Additional Paid-in Capital		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
		Shares	Amount			
Balance, December 31, 2017	\$ 22,323	10,287.3	\$ 138,089	\$ 113,816	\$ (7,082)	\$ 267,146
Cumulative adjustment for adoption of hedge accounting standard				(32)	57	25
Adoption of accounting standard related to certain tax effects stranded in accumulated other comprehensive income (loss)				1,270	(1,270)	—
Net income				6,918		6,918
Net change in debt and equity securities					(3,963)	(3,963)
Net change in debit valuation adjustments					273	273
Net change in derivatives					(275)	(275)
Employee benefit plan adjustments					30	30
Net change in foreign currency translation adjustments					(48)	(48)
Dividends declared:						
Common				(1,237)		(1,237)
Preferred				(428)		(428)
Issuance of preferred stock	2,349					2,349
Common stock issued under employee plans, net, and other		41.2	301	(9)		292
Common stock repurchased		(152.6)	(4,858)			(4,858)
Balance, March 31, 2018	\$ 24,672	10,175.9	\$ 133,532	\$ 120,298	\$ (12,278)	\$ 266,224
Balance, December 31, 2018	\$ 22,326	9,669.3	\$ 118,896	\$ 136,314	\$ (12,211)	\$ 265,325
Cumulative adjustment for adoption of lease accounting standard				165		165
Net income				7,311		7,311
Net change in debt and equity securities					2,309	2,309
Net change in debit valuation adjustments					(363)	(363)
Net change in derivatives					229	229
Employee benefit plan adjustments					28	28
Net change in foreign currency translation adjustments					(34)	(34)
Dividends declared:						
Common				(1,456)		(1,456)
Preferred				(442)		(442)
Common stock issued under employee plans, net, and other		119.1	205	(4)		201
Common stock repurchased		(220.0)	(6,263)			(6,263)
Balance, March 31, 2019	\$ 22,326	9,568.4	\$ 112,838	\$ 141,888	\$ (10,042)	\$ 267,010

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Cash Flows

	Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Operating activities		
Net income	\$ 7,311	\$ 6,918
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	1,013	834
Gains on sales of debt securities	(6)	(2)
Depreciation and premises improvements amortization	392	376
Amortization of intangibles	26	135
Net amortization of premium/discount on debt securities	362	475
Deferred income taxes	763	804
Stock-based compensation	504	415
Loans held-for-sale:		
Originations and purchases	(3,566)	(5,745)
Proceeds from sales and paydowns of loans originally classified as held for sale and instruments from related securitization activities	7,848	9,876
Net change in:		
Trading and derivative instruments	(6,543)	15,807
Other assets	3,995	11,233
Accrued expenses and other liabilities	(346)	(814)
Other operating activities, net	3,348	42
Net cash provided by operating activities	15,101	40,354
Investing activities		
Net change in:		
Time deposits placed and other short-term investments	(1,986)	3,084
Federal funds sold and securities borrowed or purchased under agreements to resell	(5,886)	(31,883)
Debt securities carried at fair value:		
Proceeds from sales	31,136	683
Proceeds from paydowns and maturities	18,903	19,052
Purchases	(51,028)	(14,176)
Held-to-maturity debt securities:		
Proceeds from paydowns and maturities	5,284	3,764
Purchases	(416)	(2,453)
Loans and leases:		
Proceeds from sales of loans originally classified as held for investment and instruments from related securitization activities	2,952	2,684
Purchases	(1,060)	(1,609)
Other changes in loans and leases, net	(1,999)	(1,190)
Other investing activities, net	(667)	(805)
Net cash used in investing activities	(4,767)	(22,849)
Financing activities		
Net change in:		
Deposits	(2,139)	19,119
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,463	1,626
Short-term borrowings	(6,181)	5,407
Long-term debt:		
Proceeds from issuance	14,716	20,934
Retirement	(14,292)	(13,577)
Preferred stock:		
Proceeds from issuance	—	2,349
Common stock repurchased	(6,263)	(4,858)
Cash dividends paid	(1,926)	(1,674)
Other financing activities, net	(886)	(724)
Net cash provided by (used in) financing activities	(15,508)	28,602
Effect of exchange rate changes on cash and cash equivalents	(607)	700
Net increase (decrease) in cash and cash equivalents	(5,781)	46,807

Cash and cash equivalents at January 1.		177,404		157,434
Cash and cash equivalents at March 31.	\$	171,623	\$	204,241

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 requires management to make estimates and assumptions that affect reported amounts and disclosures. Realized results could materially 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 2018 Annual Report on Form 10-K.

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

Accounting Standards Issued and Not Yet Adopted

Accounting for Financial Instruments – Credit Losses

The Financial Accounting Standards Board issued a new accounting standard that will be effective for the Corporation on January 1, 2020. The Standard replaces the existing measurement of the allowance for credit losses that is based on management’s best estimate of probable incurred credit losses inherent in the Corporation’s lending activities with management’s best estimate of lifetime expected credit losses inherent in the Corporation’s financial assets that are recognized at amortized cost. The lifetime expected credit losses will be determined using macroeconomic forecast assumptions and management judgments applicable to

and through the expected life of the portfolios. The Standard will also expand credit quality disclosures. While the Standard changes the measurement of the allowance for credit losses, it does not change the Corporation’s credit risk of its lending portfolios or the ultimate losses in those portfolios. The review and validation of the models and methodologies to be used in the credit loss estimation are in process and expected to be completed during 2019. The Corporation expects that, based on current expectations of future economic conditions, upon the adoption of the Standard, the Corporation’s allowance for credit losses may increase by up to 20 percent from its allowance for credit losses as of March 31, 2019, as disclosed herein, with a large portion of that increase being in the U.S. credit card portfolio. The ultimate impact will depend on the characteristics of the Corporation’s portfolios as well as the macroeconomic conditions and forecasts upon adoption, the validation of models and methodologies, and other management judgments.

New Accounting Standards

Lease Accounting

On January 1, 2019, the Corporation adopted the new accounting standards that require lessees to recognize operating leases on the Consolidated Balance Sheet as right-of-use assets and lease liabilities based on the value of the discounted future lease payments. Lessor accounting is largely unchanged. Expanded disclosures about the nature and terms of lease agreements are required prospectively and are included in Note 9 – Leases. The Corporation elected to retain prior determinations of whether an existing contract contains a lease and how the lease should be classified. The Corporation elected to recognize leases existing on January 1, 2019 through a cumulative-effect adjustment which increased retained earnings by \$165 million, with no adjustment to prior periods presented. Upon adoption, the Corporation also recognized right-of-use assets and lease liabilities of \$9.7 billion. Adoption of the standard did not have a significant effect on the Corporation’s regulatory capital measures.

Lease Accounting Principles

Lessor Arrangements

The Corporation provides equipment financing to its customers through a variety of lessor arrangements. Direct financing leases and sales-type leases are carried at the aggregate of lease payments receivable plus the estimated residual value of the leased property less unearned income, which is accreted to interest income over the lease terms using methods that approximate the interest method. Operating lease income is recognized on a straight-line basis. Leases generally do not contain non-lease components.

Lessee Arrangements

Substantially all of the Corporation’s lessee arrangements are operating leases. Under these arrangements, the Corporation records right-of-use assets and lease liabilities at lease commencement. Right-of-use assets are reported in other assets on the Consolidated Balance Sheet, and the related lease liabilities are reported in accrued expenses and other liabilities. All leases are recorded on the Consolidated Balance Sheet except for leases with an initial term less than 12 months for which the Corporation made the short-term lease election. Lease expense is recognized on a straight-line basis over the lease term and is recorded in occupancy and equipment expense in the Consolidated Statement of Income.

The Corporation made an accounting policy election not to separate lease and non-lease components of a contract that is or contains a lease for its real estate and equipment leases. As such, lease payments represent payments on both lease and non-lease components. At lease commencement, lease liabilities are recognized based on the present value of the remaining lease payments and discounted using the Corporation's incremental borrowing rate. Right-of-use assets initially equal the lease liability, adjusted for any lease payments made prior to lease commencement and any lease incentives.

NOTE 2 Net Interest Income and Noninterest Income

The table below presents the Corporation's net interest income and noninterest income disaggregated by revenue source for the three months ended March 31, 2019 and 2018. For more information, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K. For a disaggregation of noninterest income by business segment and *All Other*, see *Note 18 – Business Segment Information*.

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Net interest income		
Interest income		
Loans and leases	\$ 10,885	\$ 9,623
Debt securities	3,119	2,804
Federal funds sold and securities borrowed or purchased under agreements to resell	1,195	622
Trading account assets	1,322	1,136
Other interest income	1,649	1,414
Total interest income	18,170	15,599
Interest expense		
Deposits	1,795	760
Short-term borrowings	1,852	1,135
Trading account liabilities	345	357
Long-term debt	1,803	1,578
Total interest expense	5,795	3,830
Net interest income	\$ 12,375	\$ 11,769
Noninterest income		
Fees and commissions		
Card income		
Interchange fees (1)	\$ 896	\$ 914
Other card income	479	488
Total card income	1,375	1,402
Service charges		
Deposit-related fees	1,580	1,646
Lending-related fees	259	275
Total service charges	1,839	1,921
Investment and brokerage services		
Asset management fees	2,440	2,564
Brokerage fees	920	1,100
Total investment and brokerage services	3,360	3,664
Investment banking fees		
Underwriting income	666	740
Syndication fees	255	317
Financial advisory services	343	296
Total investment banking fees	1,264	1,353
Total fees and commissions	7,838	8,340
Trading account income	2,338	2,553
Other income	453	408
Total noninterest income	\$ 10,629	\$ 11,301

(1) Gross interchange fees were \$2.3 billion and \$2.2 billion for the three months ended March 31, 2019 and 2018, and are presented net of \$1.4 billion and \$1.3 billion, respectively, of expenses for rewards and partner payments.

NOTE 3 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 2018 Annual Report on Form 10-K. The following tables present derivative instruments included on the Consolidated Balance Sheet in derivative assets and liabilities at March 31, 2019 and December 31, 2018. 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 cash collateral received or paid.

	March 31, 2019							
		Gross Derivative Assets			Gross Derivative Liabilities			
	Contract/ Notional (1)	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	
(Dollars in billions)								
Interest rate contracts								
Swaps	\$ 19,100.3	\$ 152.8	\$ 5.3	\$ 158.1	\$ 153.4	\$ 1.1	\$ 154.5	
Futures and forwards	5,526.5	2.9	—	2.9	3.1	—	3.1	
Written options	1,604.1	—	—	—	30.8	—	30.8	
Purchased options	1,638.6	34.1	—	34.1	—	—	—	
Foreign exchange contracts								
Swaps	1,732.6	35.7	1.4	37.1	37.5	1.8	39.3	
Spot, futures and forwards	5,229.9	33.3	0.4	33.7	32.9	0.2	33.1	
Written options	306.6	—	—	—	4.5	—	4.5	
Purchased options	291.8	4.1	—	4.1	—	—	—	
Equity contracts								
Swaps	278.4	5.3	—	5.3	6.4	—	6.4	
Futures and forwards	119.9	0.4	—	0.4	0.6	—	0.6	
Written options	714.9	—	—	—	29.5	—	29.5	
Purchased options	667.9	35.6	—	35.6	—	—	—	
Commodity contracts								
Swaps	43.7	1.6	—	1.6	3.7	—	3.7	
Futures and forwards	57.8	3.1	—	3.1	0.5	—	0.5	
Written options	26.9	—	—	—	1.1	—	1.1	
Purchased options	27.0	1.1	—	1.1	—	—	—	
Credit derivatives (2)								
Purchased credit derivatives:								
Credit default swaps	425.4	4.2	—	4.2	6.3	—	6.3	
Total return swaps/options	79.4	0.2	—	0.2	1.0	—	1.0	
Written credit derivatives:								
Credit default swaps	382.6	6.0	—	6.0	3.4	—	3.4	
Total return swaps/options	73.3	0.7	—	0.7	0.4	—	0.4	
Gross derivative assets/liabilities		\$ 321.1	\$ 7.1	\$ 328.2	\$ 315.1	\$ 3.1	\$ 318.2	
Less: Legally enforceable master netting agreements				(253.3)			(253.3)	
Less: Cash collateral received/paid				(32.5)			(28.6)	
Total derivative assets/liabilities				\$ 42.4			\$ 36.3	

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

(2) The net derivative asset (liability) and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were \$2.0 billion and \$361.9 billion at March 31, 2019.

		December 31, 2018							
		Gross Derivative Assets				Gross Derivative Liabilities			
		Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total		
(Dollars in billions)	Contract/Notional (1)								
Interest rate contracts									
Swaps	\$ 15,977.9	\$ 141.0	\$ 3.2	\$ 144.2	\$ 138.9	\$ 2.0	\$ 140.9		
Futures and forwards	3,656.6	4.7	—	4.7	5.0	—	5.0		
Written options	1,584.9	—	—	—	28.6	—	28.6		
Purchased options	1,614.0	30.8	—	30.8	—	—	—		
Foreign exchange contracts									
Swaps	1,704.8	38.8	1.4	40.2	42.2	2.3	44.5		
Spot, futures and forwards	4,276.0	39.8	0.4	40.2	39.3	0.3	39.6		
Written options	256.7	—	—	—	5.0	—	5.0		
Purchased options	240.4	4.6	—	4.6	—	—	—		
Equity contracts									
Swaps	253.6	7.7	—	7.7	8.4	—	8.4		
Futures and forwards	100.0	2.1	—	2.1	0.3	—	0.3		
Written options	597.1	—	—	—	27.5	—	27.5		
Purchased options	549.4	36.0	—	36.0	—	—	—		
Commodity contracts									
Swaps	43.1	2.7	—	2.7	4.5	—	4.5		
Futures and forwards	51.7	3.2	—	3.2	0.5	—	0.5		
Written options	27.5	—	—	—	2.2	—	2.2		
Purchased options	23.4	1.7	—	1.7	—	—	—		
Credit derivatives (2)									
Purchased credit derivatives:									
Credit default swaps	408.1	5.3	—	5.3	4.9	—	4.9		
Total return swaps/options	84.5	0.4	—	0.4	1.0	—	1.0		
Written credit derivatives:									
Credit default swaps	371.9	4.4	—	4.4	4.3	—	4.3		
Total return swaps/options	87.3	0.6	—	0.6	0.6	—	0.6		
Gross derivative assets/liabilities		\$ 323.8	\$ 5.0	\$ 328.8	\$ 313.2	\$ 4.6	\$ 317.8		
Less: Legally enforceable master netting agreements				(252.7)			(252.7)		
Less: Cash collateral received/paid				(32.4)			(27.2)		
Total derivative assets/liabilities				\$ 43.7			\$ 37.9		

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

(2) The net derivative asset (liability) and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were \$(185) million and \$342.8 billion at December 31, 2018.

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. For additional information, see Note 3 – Derivatives to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

The following table presents derivative instruments included in derivative assets and liabilities on the Consolidated Balance Sheet at March 31, 2019 and December 31, 2018 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 include reducing the balance for counterparty netting and cash collateral received or paid.

For more information on offsetting of securities financing agreements, see Note 10 – Federal Funds Sold or Purchased, Securities Financing Agreements, Short-term Borrowings and Restricted Cash.

Offsetting of Derivatives (1)

	Derivative Assets		Derivative Liabilities		Derivative Assets	Derivative Liabilities
	March 31, 2019				December 31, 2018	
(Dollars in billions)						
Interest rate contracts						
Over-the-counter	\$	187.9	\$	181.9	\$	174.2
Over-the-counter cleared		5.5		4.7		4.8
Foreign exchange contracts						
Over-the-counter		72.7		74.2		82.5
Over-the-counter cleared		1.0		1.1		0.9
Equity contracts						
Over-the-counter		21.0		14.7		24.6
Exchange-traded		14.2		13.3		16.1
Commodity contracts						
Over-the-counter		2.3		3.5		3.5
Exchange-traded		0.7		0.6		1.0
Credit derivatives						
Over-the-counter		7.1		7.6		7.7
Over-the-counter cleared		3.3		3.1		2.5
Total gross derivative assets/liabilities, before netting						
Over-the-counter		291.0		281.9		292.5
Exchange-traded		14.9		13.9		17.1
Over-the-counter cleared		9.8		8.9		8.2
Less: Legally enforceable master netting agreements and cash collateral received/paid						
Over-the-counter		(265.7)		(262.3)		(264.4)
Exchange-traded		(12.3)		(12.3)		(13.5)
Over-the-counter cleared		(7.8)		(7.3)		(7.2)
Derivative assets/liabilities, after netting		29.9		22.8		32.7
Other gross derivative assets/liabilities (2)		12.5		13.5		11.0
Total derivative assets/liabilities		42.4		36.3		43.7
Less: Financial instruments collateral (3)		(15.4)		(9.5)		(16.3)
Total net derivative assets/liabilities	\$	27.0	\$	26.8	\$	27.4
					\$	29.3

(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. Exchange-traded derivatives include listed options transacted on an exchange.

(2) 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.

(3) 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 3 – Derivatives to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Derivatives Designated as Accounting Hedges

The Corporation uses various types of interest rate and foreign exchange derivative contracts to protect against changes in the

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

Fair Value Hedges

The table below summarizes information related to fair value hedges for the three months ended March 31, 2019 and 2018.

Gains and Losses on Derivatives Designated as Fair Value Hedges

(Dollars in millions)	Three Months Ended March 31			
	2019		2018	
	Derivative	Hedged Item	Derivative	Hedged Item
Interest rate risk on long-term debt (1)	\$ 1,913	\$ (1,929)	\$ (2,305)	\$ 2,236
Interest rate and foreign currency risk on long-term debt (2)	57	(48)	322	(346)
Interest rate risk on available-for-sale securities (3)	(45)	43	(31)	30
Total	\$ 1,925	\$ (1,934)	\$ (2,014)	\$ 1,920

(1) Amounts are recorded in interest expense in the Consolidated Statement of Income.

(2) For the three months ended March 31, 2019 and 2018, the derivative amount includes gains of \$170 million and losses of \$64 million in interest expense and losses of \$121 million and gains of \$433 million in other income. Line item totals are in the Consolidated Statement of Income.

(3) Amounts are recorded in interest income in the Consolidated Statement of Income.

The table below summarizes the carrying value of hedged assets and liabilities that are designated and qualifying in fair value hedging relationships along with the cumulative amount of fair value hedging adjustments included in the carrying value that have been recorded in the current hedging relationships. These fair value hedging adjustments are open basis adjustments that are not subject to amortization as long as the hedging relationship remains designated.

Designated Fair Value Hedged Assets (Liabilities)

(Dollars in millions)	March 31, 2019		December 31, 2018	
	Carrying Value	Cumulative Fair Value Adjustments (1)	Carrying Value	Cumulative Fair Value Adjustments (1)
Long-term debt	\$ (148,566)	\$ (4,691)	\$ (138,682)	\$ (2,117)
Available-for-sale debt securities	1,596	4	981	(29)

(1) For assets, increase (decrease) to carrying value and for liabilities, (increase) decrease to carrying value.

At March 31, 2019 and December 31, 2018, the cumulative fair value adjustments remaining on long-term debt and available-for-sale (AFS) debt securities from discontinued hedging relationships resulted in a decrease to the related liability of \$1.7 billion and \$1.6 billion and an increase (decrease) to the related asset of \$2 million and \$(29) million, which are being amortized over the remaining contractual life of the de-designated hedged items.

Cash Flow and Net Investment Hedges

The following table summarizes certain information related to cash flow hedges and net investment hedges for the three months

ended March 31, 2019 and 2018. Of the \$787 million after-tax net loss (\$1.0 billion pretax) on derivatives in accumulated other comprehensive income (OCI) at March 31, 2019, \$196 million after-tax (\$258 million pretax) 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. For terminated cash flow hedges, the time period over which the majority of the forecasted transactions are hedged is approximately 4 years, with a maximum length of time for certain forecasted transactions of 17 years.

Gains and Losses on Derivatives Designated as Cash Flow and Net Investment Hedges

(Dollars in millions)	Three Months Ended March 31			
	2019		2018	
	Gains (Losses) Recognized in Accumulated OCI on Derivatives	Gains (Losses) in Income Reclassified from Accumulated OCI	Gains (Losses) Recognized in Accumulated OCI on Derivatives	Gains (Losses) in Income Reclassified from Accumulated OCI
Cash flow hedges				
Interest rate risk on variable-rate assets (1)	\$ 254	\$ (23)	\$ (428)	\$ (50)
Price risk on certain restricted stock awards (2)	—	—	4	27
Total	\$ 254	\$ (23)	\$ (424)	\$ (23)
Net investment hedges				
Foreign exchange risk (3)	\$ 6	\$ 1	\$ (244)	\$ (1)

(1) Amounts reclassified from accumulated OCI are recorded in interest income in the Consolidated Statement of Income.

(2) Amounts reclassified from accumulated OCI are recorded in compensation and benefits expense in the Consolidated Statement of Income.

(3) Amounts reclassified from accumulated OCI are recorded in other income in the Consolidated Statement of Income. For the three months ended March 31, 2019 and 2018, amounts excluded from effectiveness testing and recognized in other income were gains of \$53 million and \$4 million.

Other Risk Management Derivatives

Other risk management derivatives are used by the Corporation to reduce certain risk exposures by economically hedging various assets and liabilities. The gains and losses on these derivatives are recognized in other income. The table below presents gains (losses) on these derivatives for the three months ended March 31, 2019 and 2018. These gains (losses) are largely offset by the income or expense recorded on the hedged item.

Gains and Losses on Other Risk Management Derivatives

(Dollars in millions)	Three Months Ended March 31	
	2019	2018
Interest rate risk on mortgage activities (1)	\$ 104	\$ (135)
Credit risk on loans	(26)	(3)
Interest rate and foreign currency risk on ALM activities (2)	1,112	(139)

(1) Primarily related to hedges of interest rate risk on mortgage servicing rights (MSRs) and interest rate lock commitments (IRLCs) to originate mortgage loans that will be held for sale. The net gains on IRLCs, which are not included in the table but are considered derivative instruments, were \$12 million and \$14 million for the three months ended March 31, 2019 and 2018.

(2) Primarily related to hedges of debt securities carried at fair value and hedges of foreign currency-denominated debt.

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. As of March 31, 2019 and December 31, 2018, the Corporation had transferred \$5.7 billion and \$5.8 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 \$5.6 billion and \$5.8 billion at the transfer dates. At both March 31, 2019 and December 31, 2018, the fair value of the transferred securities was \$5.5 billion.

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 3 – *Derivatives* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

The table below, which includes both derivatives and non-derivative cash instruments, identifies the amounts in the

respective income statement line items attributable to the Corporation's sales and trading revenue in *Global Markets*, categorized by primary risk, for the three months ended March 31, 2019 and 2018. The difference between total trading account income in the following table and in the Consolidated Statement of Income represents trading activities in business segments other than *Global Markets*. This table includes debit valuation adjustment (DVA) and funding valuation adjustment (FVA) gains (losses). *Global Markets* results in Note 18 – *Business Segment Information* are presented on a fully taxable-equivalent (FTE) basis. The table below is not presented on an FTE basis.

Sales and Trading Revenue

(Dollars in millions)	Three Months Ended March 31, 2019			
	Trading Account Income	Net Interest Income	Other (1)	Total
Interest rate risk	\$ 286	\$ 414	\$ 82	\$ 782
Foreign exchange risk	318	16	3	337
Equity risk	969	(176)	395	1,188
Credit risk	501	429	134	1,064
Other risk	9	19	12	40
Total sales and trading revenue	\$ 2,083	\$ 702	\$ 626	\$ 3,411

(Dollars in millions)	Three Months Ended March 31, 2018			
	Trading Account Income	Net Interest Income	Other (1)	Total
Interest rate risk	\$ 459	\$ 413	\$ 71	\$ 943
Foreign exchange risk	402	(1)	4	405
Equity risk	1,126	(96)	457	1,487
Credit risk	540	466	147	1,153
Other risk	29	47	15	91
Total sales and trading revenue	\$ 2,556	\$ 829	\$ 694	\$ 4,079

(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 \$433 million and \$476 million for the three months ended March 31, 2019 and 2018.

Credit Derivatives

The Corporation enters into credit derivatives primarily to facilitate client transactions and to manage credit risk exposures. 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. For more information on credit derivatives, see Note 3 – *Derivatives* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Credit derivative instruments where the Corporation is the seller of credit protection and their expiration at March 31, 2019 and December 31, 2018 are summarized in the following table.

Credit Derivative Instruments

	Less than One Year		One to Three Years		Three to Five Years		Over Five Years		Total	
	March 31, 2019									
(Dollars in millions)	Carrying Value									
Credit default swaps:										
Investment grade	\$	—	\$	7	\$	188	\$	505	\$	700
Non-investment grade		174		486		757		1,311		2,728
Total		174		493		945		1,816		3,428
Total return swaps/options:										
Investment grade		35		—		—		—		35
Non-investment grade		305		17		—		—		322
Total		340		17		—		—		357
Total credit derivatives	\$	514	\$	510	\$	945	\$	1,816	\$	3,785
Credit-related notes:										
Investment grade	\$	—	\$	3	\$	—	\$	575	\$	578
Non-investment grade		1		—		1		1,569		1,571
Total credit-related notes	\$	1	\$	3	\$	1	\$	2,144	\$	2,149
	Maximum Payout/Notional									
Credit default swaps:										
Investment grade	\$	52,444	\$	95,398	\$	118,377	\$	10,881	\$	277,100
Non-investment grade		21,642		31,254		41,546		11,064		105,506
Total		74,086		126,652		159,923		21,945		382,606
Total return swaps/options:										
Investment grade		54,991		430		60		73		55,554
Non-investment grade		17,245		436		39		65		17,785
Total		72,236		866		99		138		73,339
Total credit derivatives	\$	146,322	\$	127,518	\$	160,022	\$	22,083	\$	455,945
	December 31, 2018									
	Carrying Value									
Credit default swaps:										
Investment grade	\$	2	\$	44	\$	436	\$	488	\$	970
Non-investment grade		132		636		914		1,691		3,373
Total		134		680		1,350		2,179		4,343
Total return swaps/options:										
Investment grade		105		—		—		—		105
Non-investment grade		472		21		—		—		493
Total		577		21		—		—		598
Total credit derivatives	\$	711	\$	701	\$	1,350	\$	2,179	\$	4,941
Credit-related notes:										
Investment grade	\$	—	\$	—	\$	4	\$	532	\$	536
Non-investment grade		1		1		1		1,500		1,503
Total credit-related notes	\$	1	\$	1	\$	5	\$	2,032	\$	2,039
	Maximum Payout/Notional									
Credit default swaps:										
Investment grade	\$	53,758	\$	95,699	\$	95,274	\$	20,054	\$	264,785
Non-investment grade		24,297		33,881		34,530		14,426		107,134
Total		78,055		129,580		129,804		34,480		371,919
Total return swaps/options:										
Investment grade		60,042		822		59		72		60,995
Non-investment grade		24,524		1,649		39		70		26,282
Total		84,566		2,471		98		142		87,277
Total credit derivatives	\$	162,621	\$	132,051	\$	129,902	\$	34,622	\$	459,196

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 so that certain credit risk-related losses occur within acceptable, predefined limits.

Credit-related notes in the table above 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

A majority of the Corporation's derivative contracts contain credit risk-related contingent features, primarily in the form of ISDA master netting agreements and credit support documentation that enhance the creditworthiness of these instruments compared to other obligations of the respective counterparty with whom the Corporation has transacted. These contingent features may be for the benefit of the Corporation as well as its counterparties with respect to changes in the Corporation's creditworthiness and the mark-to-market exposure under the derivative transactions. At March 31, 2019 and December 31, 2018, the Corporation held cash and securities collateral of \$80.2 billion and \$81.6 billion, and posted cash and securities collateral of \$57.4 billion and \$56.5 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. The amount of additional collateral required depends on the contract and is usually a fixed incremental amount and/or the market value of the exposure. For more information on credit-related contingent features and collateral, see Note 3 – Derivatives to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

At March 31, 2019, 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 \$2.3 billion, including \$1.1 billion for Bank of America, National Association.

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 March 31, 2019 and December 31, 2018, the liability recorded for these derivative contracts was not significant.

The table below presents the amount of additional collateral that would have been contractually required by derivative contracts and other trading agreements at March 31, 2019 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 at March 31, 2019

(Dollars in millions)	One		Second	
	Incremental notch		Incremental notch	
Bank of America Corporation	\$	448	\$	383
Bank of America, N.A. and subsidiaries (1)		177		289

(1) Included in Bank of America Corporation collateral requirements in this table.

The following table 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 March 31, 2019 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 at March 31, 2019

(Dollars in millions)	One		Second	
	Incremental notch		Incremental notch	
Derivative liabilities	\$	90	\$	633
Collateral posted		64		448

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 income, on a gross and net of hedge basis for the three months ended March 31, 2019 and 2018. For more information on the valuation adjustments on derivatives, see Note 3 – Derivatives to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Valuation Adjustments on Derivatives (1)

Gains (Losses)	Three Months Ended March 31			
	2019		2018	
	Gross	Net	Gross	Net
(Dollars in millions)				
Derivative assets (CVA)	\$ 66	\$ 25	\$ (24)	\$ 18
Derivative assets/liabilities (FVA)	7	23	(37)	(1)
Derivative liabilities (DVA)	(81)	(65)	114	106

(1) At March 31, 2019 and December 31, 2018, cumulative CVA reduced the derivative assets balance by \$534 million and \$600 million, cumulative FVA reduced the net derivatives balance by \$144 million and \$151 million, and cumulative DVA reduced the derivative liabilities balance by \$350 million and \$432 million, respectively.

NOTE 4 Securities

The table below presents the amortized cost, gross unrealized gains and losses, and fair value of AFS debt securities, other debt securities carried at fair value and held-to-maturity (HTM) debt securities at March 31, 2019 and December 31, 2018.

Debt Securities

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
March 31, 2019				
(Dollars in millions)				
Available-for-sale debt securities				
Mortgage-backed securities:				
Agency	\$ 118,899	\$ 217	\$ (1,951)	\$ 117,165
Agency-collateralized mortgage obligations	5,411	35	(67)	5,379
Commercial	14,489	48	(168)	14,369
Non-agency residential (1)	1,772	251	(8)	2,015
Total mortgage-backed securities	140,571	551	(2,194)	138,928
U.S. Treasury and agency securities	61,461	261	(698)	61,024
Non-U.S. securities	10,759	5	(2)	10,762
Other taxable securities, substantially all asset-backed securities	3,375	59	(1)	3,433
Total taxable securities	216,166	876	(2,895)	214,147
Tax-exempt securities	17,360	148	(42)	17,466
Total available-for-sale debt securities	233,526	1,024	(2,937)	231,613
Other debt securities carried at fair value	10,152	211	(20)	10,343
Total debt securities carried at fair value	243,678	1,235	(2,957)	241,956
Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	198,718	1,949	(2,137)	198,530
Total debt securities (2, 3)	\$ 442,396	\$ 3,184	\$ (5,094)	\$ 440,486
December 31, 2018				
Available-for-sale debt securities				
Mortgage-backed securities:				
Agency	\$ 125,116	\$ 138	\$ (3,428)	\$ 121,826
Agency-collateralized mortgage obligations	5,621	19	(110)	5,530
Commercial	14,469	11	(402)	14,078
Non-agency residential (1)	1,792	136	(11)	1,917
Total mortgage-backed securities	146,998	304	(3,951)	143,351
U.S. Treasury and agency securities	56,239	62	(1,378)	54,923
Non-U.S. securities	9,307	5	(6)	9,306
Other taxable securities, substantially all asset-backed securities	4,387	29	(6)	4,410
Total taxable securities	216,931	400	(5,341)	211,990
Tax-exempt securities	17,349	99	(72)	17,376
Total available-for-sale debt securities	234,280	499	(5,413)	229,366
Other debt securities carried at fair value	8,595	172	(32)	8,735
Total debt securities carried at fair value	242,875	671	(5,445)	238,101
Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	203,652	747	(3,964)	200,435
Total debt securities (2, 3)	\$ 446,527	\$ 1,418	\$ (9,409)	\$ 438,536

(1) At both March 31, 2019 and December 31, 2018, the underlying collateral type included approximately 68 percent prime, four percent AltA and 28 percent subprime.

(2) Includes securities pledged as collateral of \$47.9 billion and \$40.6 billion at March 31, 2019 and December 31, 2018.

(3) The Corporation held debt securities from Fannie Mae (FNMA) and Freddie Mac (FHLMC) that each exceeded 10 percent of shareholders' equity, with an amortized cost of \$158.7 billion and \$52.0 billion, and a fair value of \$158.3 billion and \$51.9 billion at March 31, 2019, and an amortized cost of \$161.2 billion and \$52.2 billion, and a fair value of \$158.5 billion and \$51.4 billion at December 31, 2018.

At March 31, 2019, the accumulated net unrealized loss on AFS debt securities included in accumulated OCI was \$1.4 billion, net of the related income tax benefit of \$493 million. The Corporation had nonperforming AFS debt securities of \$11 million at both March 31, 2019 and December 31, 2018.

At March 31, 2019, the Corporation held equity securities at an aggregate fair value of \$881 million and other equity securities, as valued under the measurement alternative, at cost of \$228 million, both of which are included in other assets. At March 31, 2019, the Corporation also held equity securities at fair value of

\$1.2 billion included in time deposits placed and other short-term investments.

The following table 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 months ended March 31, 2019, the Corporation recorded unrealized mark-to-market net gains of \$51 million and realized net gains of \$20 million, and in the three months ended March 31, 2018, unrealized mark-to-market net gains of \$41 million and realized net losses of \$6 million. These amounts exclude hedge results.

The gross realized gains and losses on sales of AFS debt securities for the three months ended March 31, 2019 and 2018 are presented in the table below.

Other Debt Securities Carried at Fair Value

	March 31	December 31
(Dollars in millions)	2019	2018
Mortgage-backed securities	\$ 2,651	\$ 1,606
U.S. Treasury and agency securities	—	1,282
Non-U.S. securities (1)	7,689	5,844
Other taxable securities, substantially all asset-backed securities	3	3
Total	\$ 10,343	\$ 8,735

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

Gains and Losses on Sales of AFS Debt Securities

	Three Months Ended March 31	
(Dollars in millions)	2019	2018
Gross gains	\$ 117	\$ 2
Gross losses	(111)	—
Net gains on sales of AFS debt securities	\$ 6	\$ 2
Income tax expense attributable to realized net gains on sales of AFS debt securities	\$ 2	\$ —

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 March 31, 2019 and December 31, 2018.

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

	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
	March 31, 2019					
Temporarily Impaired AFS debt securities						
Mortgage-backed securities:						
Agency	\$ 820	\$ (2)	\$ 98,153	\$ (1,949)	\$ 98,973	\$ (1,951)
Agency-collateralized mortgage obligations	61	—	3,495	(67)	3,556	(67)
Commercial	1,004	(4)	9,396	(164)	10,400	(168)
Non-agency residential	86	(8)	1	—	87	(8)
Total mortgage-backed securities	1,971	(14)	111,045	(2,180)	113,016	(2,194)
U.S. Treasury and agency securities	250	(1)	43,444	(697)	43,694	(698)
Non-U.S. securities	2,350	(1)	59	(1)	2,409	(2)
Other taxable securities, substantially all asset-backed securities	265	—	65	(1)	330	(1)
Total taxable securities	4,836	(16)	154,613	(2,879)	159,449	(2,895)
Tax-exempt securities	123	—	1,470	(42)	1,593	(42)
Total temporarily impaired AFS debt securities	4,959	(16)	156,083	(2,921)	161,042	(2,937)
Other-than-temporarily impaired AFS debt securities (1)						
Non-agency residential mortgage-backed securities	53	(1)	83	1	136	—
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	\$ 5,012	\$ (17)	\$ 156,166	\$ (2,920)	\$ 161,178	\$ (2,937)
	December 31, 2018					
Temporarily Impaired AFS debt securities						
Mortgage-backed securities:						
Agency	\$ 14,771	\$ (49)	\$ 99,211	\$ (3,379)	\$ 113,982	\$ (3,428)
Agency-collateralized mortgage obligations	3	—	4,452	(110)	4,455	(110)
Commercial	1,344	(8)	11,991	(394)	13,335	(402)
Non-agency residential	106	(8)	49	(3)	155	(11)
Total mortgage-backed securities	16,224	(65)	115,703	(3,886)	131,927	(3,961)
U.S. Treasury and agency securities	288	(1)	51,374	(1,377)	51,662	(1,378)
Non-U.S. securities	773	(5)	21	(1)	794	(6)
Other taxable securities, substantially all asset-backed securities	183	(1)	185	(5)	368	(6)
Total taxable securities	17,468	(72)	167,283	(5,269)	184,751	(5,341)
Tax-exempt securities	232	(2)	2,148	(70)	2,380	(72)
Total temporarily impaired AFS debt securities	17,700	(74)	169,431	(5,339)	187,131	(5,413)
Other-than-temporarily impaired AFS debt securities (1)						
Non-agency residential mortgage-backed securities	131	—	3	—	134	—
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	\$ 17,831	\$ (74)	\$ 169,434	\$ (5,339)	\$ 187,265	\$ (5,413)

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

The Corporation had \$2 million and \$4 million of credit-related other-than-temporary impairment (OTTI) losses on AFS debt securities which were recognized in other income for the three months ended March 31, 2019 and 2018. The amount of noncredit-related OTTI losses recognized in OCI was not significant for both periods presented.

The cumulative OTTI credit losses recognized in income on AFS debt securities that the Corporation does not intend to sell were \$122 million and \$278 million at March 31, 2019 and 2018.

For more information on OTTI losses and significant assumptions used for the Corporation's underlying collateral, see Note 4 – Securities to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K. Significant assumptions used in estimating the expected cash flows for measuring credit losses on non-agency residential mortgage-backed securities (RMBS) were as follows at March 31, 2019.

Significant Assumptions

	Weighted average	Range (1)	
		10th Percentile (2)	90th Percentile (2)
Prepayment speed	12.1%	3.0%	21.0%
Loss severity	20.5	8.6	38.5
Life default rate	17.3	1.2	65.6

(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 15.8 percent for prime, 16.1 percent for Alt-A and 25.3 percent for subprime at March 31, 2019. 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 12.5 percent for prime, 16.2 percent for Alt-A and 20.6 percent for subprime at March 31, 2019.

The remaining contractual maturity distribution and yields of the Corporation's debt securities carried at fair value and HTM debt securities at March 31, 2019 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

	Due in One Year or Less		Due after One Year through Five Years		Due after Five Years through Ten Years		Due after Ten Years		Total	
	Amount	Yield (1)	Amount	Yield (1)	Amount	Yield (1)	Amount	Yield (1)	Amount	Yield (1)
(Dollars in millions)										
Amortized cost of debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$ —	—%	\$ 143	2.29%	\$ 1,557	2.41%	\$ 118,203	3.32%	\$ 119,903	3.31%
Agency-collateralized mortgage obligations	—	—	—	—	29	2.52	5,382	3.17	5,411	3.17
Commercial	135	1.78	2,498	2.37	10,931	2.54	925	3.01	14,489	2.53
Non-agency residential	—	—	—	—	13	—	3,227	10.28	3,240	10.24
Total mortgage-backed securities	135	1.78	2,641	2.36	12,530	2.52	127,737	3.49	143,043	3.38
U.S. Treasury and agency securities	739	1.15	29,186	1.52	31,517	2.44	19	2.53	61,461	1.98
Non-U.S. securities	17,607	1.00	701	2.62	17	4.16	114	6.63	18,439	1.10
Other taxable securities, substantially all asset-backed securities	701	3.66	1,944	3.55	646	3.14	84	5.91	3,375	3.55
Total taxable securities	19,182	1.11	34,472	1.72	44,710	2.47	127,954	3.49	226,318	2.81
Tax-exempt securities	786	2.55	7,353	2.43	6,207	2.37	3,014	1.97	17,360	2.34
Total amortized cost of debt securities carried at fair value	\$ 19,968	1.16	\$ 41,825	1.85	\$ 50,917	2.46	\$ 130,968	3.46	\$ 243,678	2.78
Amortized cost of HTM debt securities (2)	\$ 370	5.41	\$ 17	3.93	\$ 1,669	3.04	\$ 196,662	3.23	\$ 198,718	3.24
Debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$ —		\$ 142		\$ 1,544		\$ 116,492		\$ 118,178	
Agency-collateralized mortgage obligations	—		—		28		5,351		5,379	
Commercial	135		2,484		10,832		918		14,369	
Non-agency residential	—		—		27		3,626		3,653	
Total mortgage-backed securities	135		2,626		12,431		126,387		141,579	
U.S. Treasury and agency securities	738		28,583		31,684		19		61,024	
Non-U.S. securities	17,604		712		17		118		18,451	
Other taxable securities, substantially all asset-backed securities	703		1,967		681		85		3,436	
Total taxable securities	19,180		33,888		44,813		126,609		224,490	
Tax-exempt securities	786		7,370		6,285		3,025		17,466	
Total debt securities carried at fair value	\$ 19,966		\$ 41,258		\$ 51,098		\$ 129,634		\$ 241,956	
Fair value of HTM debt securities (2)	\$ 370		\$ 17		\$ 1,650		\$ 196,493		\$ 198,530	

(1) The weighted-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 5 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 March 31, 2019 and December 31, 2018.

	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)	Loans Accounted for Under the Fair Value Option	Total Outstandings
March 31, 2019							
(Dollars in millions)							
Consumer real estate							
Core portfolio							
Residential mortgage	\$ 1,068	\$ 225	\$ 734	\$ 2,027	\$ 196,497		\$ 198,524
Home equity	163	81	348	592	38,114		38,706
Non-core portfolio							
Residential mortgage	622	242	1,864	2,728	10,771		13,499
Home equity	126	58	270	454	7,081		7,535
Credit card and other consumer							
U.S. credit card	546	381	1,005	1,932	91,077		93,009
Direct/Indirect consumer (4)	267	76	33	376	89,172		89,548
Other consumer (5)	—	—	—	—	152		152
Total consumer	2,792	1,063	4,254	8,109	432,864		440,973
Consumer loans accounted for under the fair value option (6)						\$ 668	668
Total consumer loans and leases	2,792	1,063	4,254	8,109	432,864	668	441,641
Commercial							
U.S. commercial	515	180	356	1,051	299,348		300,399
Non-U.S. commercial	11	2	—	13	101,016		101,029
Commercial real estate (7)	15	—	10	25	61,190		61,215
Commercial lease financing	256	34	21	311	20,885		21,196
U.S. small business commercial	88	49	99	236	14,380		14,616
Total commercial	885	265	486	1,636	496,819		498,455
Commercial loans accounted for under the fair value option (6)						5,519	5,519
Total commercial loans and leases	885	265	486	1,636	496,819	5,519	503,974
Total loans and leases (8)	\$ 3,677	\$ 1,328	\$ 4,740	\$ 9,745	\$ 929,683	\$ 6,187	\$ 945,615
Percentage of outstandings	0.39%	0.14%	0.50%	1.03%	98.32%	0.65%	100.00%

(1) Consumer real estate loans 30-59 days past due includes fully-insured loans of \$575 million and nonperforming loans of \$188 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$221 million and nonperforming loans of \$134 million.

(2) Consumer real estate includes fully-insured loans of \$1.6 billion.

(3) Consumer real estate includes \$1.8 billion and direct/indirect consumer includes \$51 million of nonperforming loans.

(4) Total outstandings includes auto and specialty lending loans and leases of \$49.9 billion, unsecured consumer lending loans of \$355 million, U.S. securities-based lending loans of \$35.8 billion, non-U.S. consumer loans of \$2.8 billion and other consumer loans of \$697 million.

(5) Substantially all of other consumer is consumer overdrafts.

(6) Consumer loans accounted for under the fair value option includes residential mortgage loans of \$315 million and home equity loans of \$353 million. Commercial loans accounted for under the fair value option includes U.S. commercial loans of \$2.8 billion and non-U.S. commercial loans of \$2.7 billion. For additional information, see Note 15 - Fair Value Measurements and Note 16 - Fair Value Option.

(7) Total outstandings includes U.S. commercial real estate loans of \$56.8 billion and non-U.S. commercial real estate loans of \$4.4 billion.

(8) Total outstandings includes loans and leases pledged as collateral of \$25.4 billion. The Corporation also pledged \$164.4 billion of loans with no related outstanding borrowings to secure potential borrowing capacity with the Federal Reserve Bank and Federal Home Loan Bank (FHLB).

	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)	Loans Accounted for Under the Fair Value Option	Total Outstandings
(Dollars in millions)	December 31, 2018						
Consumer real estate							
Core portfolio							
Residential mortgage	\$ 1,188	\$ 249	\$ 793	\$ 2,230	\$ 191,465		\$ 193,695
Home equity	200	85	387	672	39,338		40,010
Non-core portfolio							
Residential mortgage	757	309	2,201	3,267	11,595		14,862
Home equity	139	69	339	547	7,729		8,276
Credit card and other consumer							
U.S. credit card	577	418	994	1,989	96,349		98,338
Direct/Indirect consumer (4)	317	90	40	447	90,719		91,166
Other consumer (5)	—	—	—	—	202		202
Total consumer	3,178	1,220	4,754	9,152	437,397		446,549
Consumer loans accounted for under the fair value option (6)						\$ 682	682
Total consumer loans and leases	3,178	1,220	4,754	9,152	437,397	682	447,231
Commercial							
U.S. commercial	594	232	573	1,399	297,878		299,277
Non-U.S. commercial	1	49	—	50	98,726		98,776
Commercial real estate (7)	29	16	14	59	60,786		60,845
Commercial lease financing	124	114	37	275	22,259		22,534
U.S. small business commercial	83	54	96	233	14,332		14,565
Total commercial	831	465	720	2,016	493,981		495,997
Commercial loans accounted for under the fair value option (6)						3,667	3,667
Total commercial loans and leases	831	465	720	2,016	493,981	3,667	499,664
Total loans and leases (8)	\$ 4,009	\$ 1,685	\$ 5,474	\$ 11,168	\$ 931,378	\$ 4,349	\$ 946,895
Percentage of outstandings	0.42%	0.18%	0.58%	1.18%	98.36%	0.46%	100.00%

(1) Consumer real estate loans 30-59 days past due includes fully-insured loans of \$637 million and nonperforming loans of \$217 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$269 million and nonperforming loans of \$146 million.

(2) Consumer real estate includes fully-insured loans of \$1.9 billion.

(3) Consumer real estate includes \$1.8 billion and direct/indirect consumer includes \$53 million of nonperforming loans.

(4) Total outstandings includes auto and specialty lending loans and leases of \$50.1 billion, unsecured consumer lending loans of \$383 million, U.S. securities-based lending loans of \$37.0 billion, non-U.S. consumer loans of \$2.9 billion and other consumer loans of \$746 million.

(5) Substantially all of other consumer is consumer overdrafts.

(6) Consumer loans accounted for under the fair value option includes residential mortgage loans of \$336 million and home equity loans of \$346 million. Commercial loans accounted for under the fair value option includes U.S. commercial loans of \$2.5 billion and non-U.S. commercial loans of \$1.1 billion. For additional information, see Note 15 – Fair Value Measurements and Note 16 – Fair Value Option.

(7) Total outstandings includes U.S. commercial real estate loans of \$56.6 billion and non-U.S. commercial real estate loans of \$4.2 billion.

(8) Total outstandings includes loans and leases pledged as collateral of \$36.7 billion. The Corporation also pledged \$166.1 billion of loans with no related outstanding borrowings to secure potential borrowing capacity with the Federal Reserve Bank and FHLB.

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. All other loans are generally characterized as non-core loans and represent runoff portfolios.

The Corporation has entered into long-term credit protection agreements with FNMA and FHLMC on loans totaling \$6.3 billion and \$6.1 billion at March 31, 2019 and December 31, 2018, 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.

During the three months ended March 31, 2019 and 2018, the Corporation sold \$950 million and \$825 million of consumer real estate 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 March 31, 2019 and December 31, 2018, \$197 million and \$221 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 troubled debt restructurings (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 March 31, 2019, nonperforming loans discharged in Chapter 7 bankruptcy with no change in repayment terms were \$173 million of which \$94 million were current on their contractual payments, while \$65 million were 90 days or more past due. Of the contractually current nonperforming loans, 60 percent were discharged in Chapter 7 bankruptcy over 12 months ago, and 52 percent were discharged 24 months or more ago.

The table below presents the Corporation's nonperforming loans and leases including nonperforming TDRs, and loans accruing past due 90 days or more at March 31, 2019 and December 31, 2018. 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 2018 Annual Report on Form 10-K.

Credit Quality

	Nonperforming Loans and Leases		Accruing Past Due 90 Days or More	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)				
Consumer real estate				
Core portfolio				
Residential mortgage (1)	\$ 976	\$ 1,010	\$ 233	\$ 274
Home equity	906	955	—	—
Non-core portfolio				
Residential mortgage (1)	797	883	1,360	1,610
Home equity	845	938	—	—
Credit card and other consumer				
U.S. credit card	n/a	n/a	1,005	994
Direct/Indirect consumer	54	56	31	38
Total consumer	3,578	3,842	2,629	2,916
Commercial				
U.S. commercial	870	794	46	197
Non-U.S. commercial	80	80	—	—
Commercial real estate	213	156	—	4
Commercial lease financing	52	18	13	29
U.S. small business commercial	57	54	91	84
Total commercial	1,272	1,102	150	314
Total loans and leases	\$ 4,850	\$ 4,944	\$ 2,779	\$ 3,230

(1) Residential mortgage loans in the core and non-core portfolios accruing past due 90 days or more are fully-insured loans. At March 31, 2019 and December 31, 2018, residential mortgage includes \$1.2 billion and \$1.4 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 \$391 million and \$498 million of loans on which interest is still accruing.
n/a = not applicable

Credit Quality Indicators

The Corporation monitors credit quality within its Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments based on primary credit quality indicators. For more information on the portfolio segments and their related credit quality indicators, see *Note 1 – Summary of Significant Accounting Principles* and *Note 5 – Outstanding Loans and Leases* to the

Consolidated Financial Statements of the Corporation's 2018 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 March 31, 2019 and December 31, 2018.

Consumer Real Estate – Credit Quality Indicators (1)

	Core Residential Mortgage	Non-core Residential Mortgage	Core Home Equity	Non-core Home Equity	Core Residential Mortgage	Non-core Residential Mortgage	Core Home Equity	Non-core Home Equity
(Dollars in millions)	March 31, 2019				December 31, 2018			
Refreshed LTV								
Less than or equal to 90 percent	\$ 178,424	\$ 9,388	\$ 38,003	\$ 6,001	\$ 173,911	\$ 10,272	\$ 39,246	\$ 6,478
Greater than 90 percent but less than or equal to 100 percent	2,676	473	319	613	2,349	533	354	715
Greater than 100 percent	931	497	384	921	817	545	410	1,083
Fully-insured loans (2)	16,493	3,141			16,618	3,512		
Total consumer real estate	\$ 198,524	\$ 13,499	\$ 38,706	\$ 7,535	\$ 193,695	\$ 14,862	\$ 40,010	\$ 8,276
Refreshed FICO score								
Less than 620	\$ 2,079	\$ 1,635	\$ 1,040	\$ 1,351	\$ 2,125	\$ 1,974	\$ 1,064	\$ 1,503
Greater than or equal to 620 and less than 680	4,634	1,483	1,945	1,560	4,538	1,719	2,008	1,720
Greater than or equal to 680 and less than 740	23,770	2,777	6,695	1,978	23,841	3,042	7,008	2,188
Greater than or equal to 740	151,548	4,463	29,026	2,646	146,573	4,615	29,930	2,865
Fully-insured loans (2)	16,493	3,141			16,618	3,512		
Total consumer real estate	\$ 198,524	\$ 13,499	\$ 38,706	\$ 7,535	\$ 193,695	\$ 14,862	\$ 40,010	\$ 8,276

(1) Excludes \$668 million and \$682 million of loans accounted for under the fair value option at March 31, 2019 and December 31, 2018.

(2) Credit quality indicators are not reported for fully-insured loans as principal repayment is insured.

Credit Card and Other Consumer – Credit Quality Indicators

	U.S. Credit Card	Direct/Indirect Consumer	Other Consumer	U.S. Credit Card	Direct/Indirect Consumer	Other Consumer
(Dollars in millions)	March 31, 2019			December 31, 2018		
Refreshed FICO score						
Less than 620	\$ 4,936	\$ 1,630		\$ 5,016	\$ 1,719	
Greater than or equal to 620 and less than 680	11,919	2,945		12,415	3,124	
Greater than or equal to 680 and less than 740	34,085	8,634		35,781	8,921	
Greater than or equal to 740	42,069	37,038		45,126	36,709	
Other internal credit metrics (1, 2)		39,301	\$ 152		40,693	\$ 202
Total credit card and other consumer	\$ 93,009	\$ 89,548	\$ 152	\$ 98,338	\$ 91,166	\$ 202

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

(2) Direct/indirect consumer includes \$38.6 billion and \$39.9 billion of securities-based lending which is overcollateralized and therefore has minimal credit risk at March 31, 2019 and December 31, 2018.

Commercial – Credit Quality Indicators (1)

	U.S. Commercial	Non-U.S. Commercial	Commercial Real Estate	Commercial Lease Financing	U.S. Small Business Commercial (2)
(Dollars in millions)	March 31, 2019				
Risk ratings					
Pass rated	\$ 292,401	\$ 100,015	\$ 60,257	\$ 20,797	\$ 249
Reservable criticized	7,998	1,014	958	399	27
Refreshed FICO score (3)					
Less than 620					277
Greater than or equal to 620 and less than 680					695
Greater than or equal to 680 and less than 740					2,081
Greater than or equal to 740					4,382
Other internal credit metrics (3, 4)					6,905
Total commercial	\$ 300,399	\$ 101,029	\$ 61,215	\$ 21,196	\$ 14,616
	December 31, 2018				
Risk ratings					
Pass rated	\$ 291,918	\$ 97,916	\$ 59,910	\$ 22,168	\$ 389
Reservable criticized	7,359	860	935	366	29
Refreshed FICO score (3)					
Less than 620					264
Greater than or equal to 620 and less than 680					684
Greater than or equal to 680 and less than 740					2,072
Greater than or equal to 740					4,254
Other internal credit metrics (3, 4)					6,873
Total commercial	\$ 299,277	\$ 98,776	\$ 60,845	\$ 22,534	\$ 14,565

(1) Excludes \$5.5 billion and \$3.7 billion of loans accounted for under the fair value option at March 31, 2019 and December 31, 2018.

(2) At March 31, 2019 and December 31, 2018, U.S. small business commercial includes \$726 million and \$731 million of criticized business card and small business loans which are evaluated using refreshed FICO scores or internal credit metrics, including delinquency status, rather than risk ratings. At both March 31, 2019 and December 31, 2018, 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.

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. For additional information, see Note 1 – Summary of Significant Accounting Principles and Note 5 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2018 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. 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 5 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2018 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 \$813 million were included in TDRs at March 31, 2019, of which \$173 million were classified as nonperforming and \$326 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 March 31, 2019 and December 31, 2018, remaining commitments to lend additional funds to debtors whose terms have been modified in a consumer real estate TDR were not significant. Consumer real estate foreclosed properties totaled \$236 million and \$244 million at March 31, 2019 and December 31, 2018. The carrying value of consumer real estate loans, including fully-insured loans, for which formal foreclosure proceedings were in process at March 31, 2019 was \$2.2 billion. During the three months ended March 31, 2019 and 2018, the Corporation reclassified \$164 million and \$168 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. The reclassifications represent non-cash investing activities and, accordingly, are not reflected in the Consolidated Statement of Cash Flows.

The following table provides the unpaid principal balance, carrying value and related allowance at March 31, 2019 and December 31, 2018, and the average carrying value and interest

income recognized for the three months ended March 31, 2019 and 2018 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

	Unpaid Principal Balance	Carrying Value	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance
(Dollars in millions)	March 31, 2019			December 31, 2018		
With no recorded allowance						
Residential mortgage	\$ 5,087	\$ 4,033	\$ —	\$ 5,396	\$ 4,268	\$ —
Home equity	2,892	1,582	—	2,948	1,599	—
With an allowance recorded						
Residential mortgage	\$ 1,777	\$ 1,739	\$ 95	\$ 1,977	\$ 1,929	\$ 114
Home equity	750	704	114	812	760	144
Total						
Residential mortgage	\$ 6,864	\$ 5,772	\$ 95	\$ 7,373	\$ 6,197	\$ 114
Home equity	3,642	2,286	114	3,760	2,359	144

	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)
	Three Months Ended March 31			
	2019		2018	
With no recorded allowance				
Residential mortgage	\$ 4,171	\$ 45	\$ 6,462	\$ 65
Home equity	1,593	25	1,961	27
With an allowance recorded				
Residential mortgage	\$ 1,848	\$ 18	\$ 2,705	\$ 25
Home equity	737	6	892	6
Total				
Residential mortgage	\$ 6,019	\$ 63	\$ 9,167	\$ 90
Home equity	2,330	31	2,853	33

(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 March 31, 2019 and 2018 unpaid principal balance, carrying value, and average pre- and post-modification interest rates of consumer real estate loans that were modified in TDRs during the three months ended March 31, 2019 and 2018. 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 March 31, 2019 and 2018

	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate (1)
(Dollars in millions)	March 31, 2019			
Residential mortgage	\$ 135	\$ 112	4.19%	4.27%
Home equity	63	48	5.23	4.86
Total	\$ 198	\$ 160	4.52	4.46

	March 31, 2018			
Residential mortgage	\$ 407	\$ 358	4.39%	4.36%
Home equity	207	161	4.37	4.37
Total	\$ 614	\$ 519	4.39	4.36

(1) 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.

The table below presents the March 31, 2019 and 2018 carrying value for consumer real estate loans that were modified in a TDR during the three months ended March 31, 2019 and 2018, by type of modification.

Consumer Real Estate – Modification Programs

	TDRs Entered into During the Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Modifications under government programs (1)	\$ 3	\$ 13
Modifications under proprietary programs (1)	26	200
Loans discharged in Chapter 7 bankruptcy (2)	28	64
Trial modifications	103	242
Total modifications	\$ 160	\$ 519

(1) Includes other modifications such as term or payment extensions and repayment plans. During the three months ended March 31, 2018, this included \$168 million of modifications that met the definition of a TDR related to the 2017 hurricanes. These modifications had been written down to their net realizable value less costs to sell or were fully insured as of March 31, 2018.

(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 months ended March 31, 2019 and 2018 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 March 31	
	2019	2018
(Dollars in millions)		
Modifications under government programs	\$ 7	\$ 13
Modifications under proprietary programs	29	31
Loans discharged in Chapter 7 bankruptcy (1)	9	23
Trial modifications (2)	16	45
Total modifications	\$ 61	\$ 112

(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 and local laws and guidelines. Credit card and other consumer loan modifications generally involve reducing the interest rate on the account, placing the customer on a fixed payment plan not exceeding 60 months and canceling the customer's available line of credit, all of which are considered TDRs. 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.

The table below provides the unpaid principal balance, carrying value and related allowance at March 31, 2019 and December 31, 2018 and the average carrying value for the three months ended March 31, 2019 and 2018 for TDRs within the Credit Card and Other Consumer portfolio segment.

Impaired Loans – Credit Card and Other Consumer

	Unpaid Principal Balance			Carrying Value (1)			Related Allowance			Average Carrying Value (2)		
	March 31, 2019			December 31, 2018			Three Months Ended March 31			2019		
(Dollars in millions)												
With no recorded allowance												
Direct/Indirect consumer	\$ 74	\$ 34	\$ —	\$ 72	\$ 33	\$ —	\$ 34	\$ 27				
With an allowance recorded												
U.S. credit card	\$ 554	\$ 566	\$ 155	\$ 522	\$ 533	\$ 154	\$ 547	\$ 465				
Direct/Indirect consumer	—	—	—	—	—	—	—	1				
Total												
U.S. credit card	\$ 554	\$ 566	\$ 155	\$ 522	\$ 533	\$ 154	\$ 547	\$ 465				
Direct/Indirect consumer	74	34	—	72	33	—	34	28				

(1) Includes accrued interest and fees.

(2) The related interest income recognized, which included 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 was considered collectible, was not significant for the three months ended March 31, 2019 and 2018.

The table below provides information on the Corporation's primary modification programs for the Credit Card and Other Consumer TDR portfolio at March 31, 2019 and December 31, 2018.

Credit Card and Other Consumer – TDRs by Program Type

	U.S. Credit Card		Direct/Indirect Consumer		Total TDRs by Program Type	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)						
Internal programs	\$ 285	\$ 259	\$ —	\$ —	\$ 285	\$ 259
External programs	281	273	—	—	281	273
Other	—	1	34	33	34	34
Total	\$ 566	\$ 533	\$ 34	\$ 33	\$ 600	\$ 566
Percent of balances current or less than 30 days past due	85%	85%	85%	81%	85%	85%

The table below provides information on the Corporation's Credit Card and Other Consumer TDR portfolio including the March 31, 2019 and 2018 unpaid principal balance, carrying value, and average pre- and post-modification interest rates of loans that were modified in TDRs during the three months ended March 31, 2019 and 2018.

Credit Card and Other Consumer – TDRs Entered into During the Three Months Ended March 31, 2019 and 2018

	Unpaid Principal Balance		Carrying Value (1)		Pre-Modification Interest Rate	Post-Modification Interest Rate
	March 31, 2019		March 31, 2018			
(Dollars in millions)						
U.S. credit card	\$ 98	\$ 105			19.86%	5.21%
Direct/Indirect consumer	18	10			4.96	4.96
Total	\$ 116	\$ 115			18.56	5.19
U.S. credit card	\$ 74	\$ 80			18.83%	5.20%
Direct/Indirect consumer	17	10			4.98	4.67
Total	\$ 91	\$ 90			17.24	5.14

(1) Includes accrued interest and fees.

Credit card and other consumer loans are deemed to be in payment default during the quarter in which a borrower misses the second of two consecutive payments. Payment defaults are one of the factors considered when projecting future cash flows in the calculation of the allowance for loan and lease losses for impaired credit card and other consumer loans. Based on historical experience, the Corporation estimates that 14 percent of new U.S. credit card TDRs and 15 percent of new direct/indirect consumer TDRs may be in payment default within 12 months after modification.

Commercial Loans

Impaired commercial loans include nonperforming loans and leases and TDRs (both performing and nonperforming). For more information on impaired commercial loans, see Note 5 – Outstanding Loans and Leases to the Consolidated Financial

Statements of the Corporation's 2018 Annual Report on Form 10-K.

At March 31, 2019 and December 31, 2018, remaining commitments to lend additional funds to debtors whose terms have been modified in a commercial loan TDR were \$347 million and \$297 million.

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 March 31, 2019 and December 31, 2018, and the average carrying value for the three months ended March 31, 2019 and 2018. Certain impaired commercial loans do not have a related allowance because the valuation of these impaired loans exceeded the carrying value, which is net of previously recorded charge-offs.

Impaired Loans – Commercial

	Unpaid Principal Balance	Carrying Value	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance	Average Carrying Value (1)	
							Three Months Ended March 31	
(Dollars in millions)	March 31, 2019			December 31, 2018			2019	2018
With no recorded allowance								
U.S. commercial	\$ 761	\$ 750	\$ —	\$ 638	\$ 616	\$ —	\$ 683	\$ 672
Non-U.S. commercial	93	93	—	93	93	—	93	62
Commercial real estate	226	226	—	—	—	—	113	69
Commercial lease financing	—	—	—	—	—	—	—	6
With an allowance recorded								
U.S. commercial	\$ 1,466	\$ 1,245	\$ 122	\$ 1,437	\$ 1,270	\$ 121	\$ 1,258	\$ 1,105
Non-U.S. commercial	254	240	37	155	149	30	195	445
Commercial real estate	156	79	6	247	162	16	121	36
Commercial lease financing	90	87	13	71	71	—	79	11
U.S. small business commercial (2)	85	76	29	83	72	29	74	75
Total								
U.S. commercial	\$ 2,227	\$ 1,995	\$ 122	\$ 2,075	\$ 1,886	\$ 121	\$ 1,941	\$ 1,777
Non-U.S. commercial	347	333	37	248	242	30	288	507
Commercial real estate	382	305	6	247	162	16	234	105
Commercial lease financing	90	87	13	71	71	—	79	17
U.S. small business commercial (2)	85	76	29	83	72	29	74	75

(1) The related interest income recognized, which included 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 was considered collectible, was not significant for the three months ended March 31, 2019 and 2018.

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

The table below presents the March 31, 2019 and 2018 unpaid principal balance and carrying value of commercial loans that were modified as TDRs during the three months ended March 31, 2019 and 2018. The table below includes loans that were initially classified as TDRs during the period and also loans that had previously been classified as TDRs and were modified again during the period.

Commercial – TDRs Entered into During the Three Months Ended March 31, 2019 and 2018

	Unpaid Principal Balance	Carrying Value
(Dollars in millions)	March 31, 2019	
U.S. commercial	\$ 480	\$ 459
Non-U.S. commercial	103	103
Commercial real estate	198	198
Commercial lease financing	3	3
U.S. small business commercial (1)	4	4
Total	\$ 788	\$ 767
	March 31, 2018	
U.S. commercial	\$ 618	\$ 550
Non-U.S. commercial	331	331
Commercial lease financing	2	1
U.S. small business commercial (1)	3	3
Total	\$ 954	\$ 885

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

A commercial TDR is generally deemed to be in payment default when the loan is 90 days or more past due, including delinquencies that were not resolved as part of the modification. U.S. small business commercial TDRs are deemed to be in payment default during the quarter in which a borrower misses the second of two consecutive payments. Payment defaults are one of the factors considered when projecting future cash flows, along with observable market prices or fair value of collateral when measuring the allowance for loan and lease losses. TDRs that were in payment default had a carrying value of \$116 million and \$139 million for U.S. commercial, \$3 million and \$18 million for commercial real estate and \$3 million and \$4 million for commercial lease financing at March 31, 2019 and 2018.

Loans Held-for-sale

The Corporation had LHFS of \$6.3 billion and \$10.4 billion at March 31, 2019 and December 31, 2018. For the three months ended March 31, 2019 and 2018, cash and non-cash proceeds from sales and paydowns of loans originally classified as LHFS were \$7.9 billion and \$9.8 billion, and cash used for originations and purchases of LHFS totaled \$3.6 billion and \$5.7 billion.

NOTE 6 Allowance for Credit Losses

The table below summarizes the changes in the allowance for credit losses by portfolio segment for the three months ended March 31, 2019 and 2018.

	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total
(Dollars in millions)	Three Months Ended March 31, 2019			
Allowance for loan and lease losses, January 1	\$ 928	\$ 3,874	\$ 4,799	\$ 9,601
Loans and leases charged off	(103)	(1,057)	(177)	(1,337)
Recoveries of loans and leases previously charged off	108	217	21	346
Net charge-offs	5	(840)	(156)	(991)
Provision for loan and lease losses	(70)	900	178	1,008
Other (1)	(41)	—	—	(41)
Allowance for loan and lease losses, March 31	822	3,934	4,821	9,577
Reserve for unfunded lending commitments, January 1	—	—	797	797
Provision for unfunded lending commitments	—	—	5	5
Reserve for unfunded lending commitments, March 31	—	—	802	802
Allowance for credit losses, March 31	\$ 822	\$ 3,934	\$ 5,623	\$ 10,379
	Three Months Ended March 31, 2018			
Allowance for loan and lease losses, January 1	\$ 1,720	\$ 3,663	\$ 5,010	\$ 10,393
Loans and leases charged off	(174)	(1,006)	(116)	(1,296)
Recoveries of loans and leases previously charged off	147	203	35	385
Net charge-offs	(27)	(803)	(81)	(911)
Provision for loan and lease losses	(128)	876	81	829
Other (1)	(35)	(16)	—	(51)
Allowance for loan and lease losses, March 31	1,530	3,720	5,010	10,260
Reserve for unfunded lending commitments, January 1	—	—	777	777
Provision for unfunded lending commitments	—	—	5	5
Reserve for unfunded lending commitments, March 31	—	—	782	782
Allowance for credit losses, March 31	\$ 1,530	\$ 3,720	\$ 5,792	\$ 11,042

(1) Primarily represents write-offs of purchased credit-impaired loans, the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments, transfers to held for sale, and certain other reclassifications.

The table below presents the allowance and the carrying value of outstanding loans and leases by portfolio segment at March 31, 2019 and December 31, 2018.

	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total
(Dollars in millions)	March 31, 2019			
Impaired loans and troubled debt restructurings (1)				
Allowance for loan and lease losses	\$ 209	\$ 155	\$ 207	\$ 571
Carrying value (2)	8,058	600	2,796	11,454
Allowance as a percentage of carrying value	2.59%	25.83%	7.40%	4.99%
Loans collectively evaluated for impairment				
Allowance for loan and lease losses	\$ 613	\$ 3,779	\$ 4,614	\$ 9,006
Carrying value (2, 3)	250,206	182,109	495,659	927,974
Allowance as a percentage of carrying value (3)	0.24%	2.08%	0.93%	0.97%
Total				
Allowance for loan and lease losses	\$ 822	\$ 3,934	\$ 4,821	\$ 9,577
Carrying value (2, 3)	258,264	182,709	498,455	939,428
Allowance as a percentage of carrying value (3)	0.32%	2.15%	0.97%	1.02%
	December 31, 2018			
Impaired loans and troubled debt restructurings (1)				
Allowance for loan and lease losses	\$ 258	\$ 154	\$ 196	\$ 608
Carrying value (2)	8,556	566	2,433	11,555
Allowance as a percentage of carrying value	3.02%	27.21%	8.06%	5.26%
Loans collectively evaluated for impairment				
Allowance for loan and lease losses	\$ 670	\$ 3,720	\$ 4,603	\$ 8,993
Carrying value (2, 3)	248,287	189,140	493,564	930,991
Allowance as a percentage of carrying value (3)	0.27%	1.97%	0.93%	0.97%
Total				
Allowance for loan and lease losses	\$ 928	\$ 3,874	\$ 4,799	\$ 9,601

Carrying value (2, 3)	256,843	189,706	495,997	942,546
Allowance as a percentage of carrying value (3)	0.36%	2.04%	0.97%	1.02%

⁽¹⁾ Impaired loans include nonperforming commercial loans and leases, as well as 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⁾ Amounts are presented gross of the allowance for loan and lease losses.

⁽³⁾ Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of \$6.2 billion and \$4.3 billion at March 31, 2019 and December 31, 2018.

NOTE 7 Securitizations and Other Variable Interest Entities

The Corporation utilizes VIEs in the ordinary course of business to support its own and its customers' financing and investing needs. The tables in this Note present the assets, liabilities and maximum loss exposure of consolidated and unconsolidated VIEs at March 31, 2019 and December 31, 2018 in situations where the Corporation has continuing involvement with transferred assets or if the Corporation otherwise has a variable interest in the VIE. For more information on the Corporation's use of VIEs and related maximum loss exposure, see Note 1 – *Summary of Significant Accounting Principles* and Note 7 – *Securitizations and Other Variable Interest Entities* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

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 4 – *Securities* or Note 5 – *Outstanding Loans and Leases*.

The Corporation did not provide financial support to consolidated or unconsolidated VIEs during the three months ended March 31, 2019 or the year ended December 31, 2018 that it was not previously contractually required to provide, nor does it intend to do so.

The Corporation had liquidity commitments, including written put options and collateral value guarantees, with certain unconsolidated VIEs of \$220 million and \$218 million at March 31, 2019 and December 31, 2018.

First-lien Mortgage Securitizations

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 in Note 11 – *Commitments and Contingencies*, 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 months ended March 31, 2019 and 2018.

First-lien Mortgage Securitizations

(Dollars in millions)

Proceeds from loan sales (1)

Gains on securitizations (2)

Repurchases from securitization trusts (3)

Residential Mortgage - Agency		Commercial Mortgage	
Three Months Ended March 31			
2019	2018	2019	2018
\$ 1,096	\$ 1,655	\$ 987	\$ 538
7	18	17	18
244	501	—	—

(1) The Corporation transfers residential mortgage loans to securitizations sponsored primarily by the GSEs or Government National Mortgage Association (GNMA) in the normal course of business and primarily receives RMBS in exchange. Substantially all of these securities are classified as Level 2 within the fair value hierarchy and are sold shortly after receipt.

(2) A majority of the first-lien residential 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 \$8 million and \$24 million, net of hedges, during the three months ended March 31, 2019 and 2018, 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.

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 \$219.5 billion and \$259.7 billion at March 31, 2019 and 2018. Servicing fee and ancillary fee income on serviced loans was \$148 million and \$197 million during the three months ended March 31, 2019 and 2018. Servicing advances on serviced loans, including loans serviced for others and loans held for investment, were \$3.0 billion and \$3.3

billion at March 31, 2019 and December 31, 2018. For more information on MSRs, see Note 15 – *Fair Value Measurements*.

During the three months ended March 31, 2019, the Corporation deconsolidated agency residential mortgage securitization trusts with total assets of \$705 million. There were no significant deconsolidations during the three months ended March 31, 2018.

The following table summarizes select information related to first-lien mortgage securitization trusts in which the Corporation held a variable interest at March 31, 2019 and December 31, 2018.

First-lien Mortgage VIEs

	Residential Mortgage									
	Agency		Non-agency							
			Prime		Subprime		Alt-A		Commercial Mortgage	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)										
Unconsolidated VIEs										
Maximum loss exposure ⁽¹⁾	\$ 15,689	\$ 16,011	\$ 420	\$ 448	\$ 1,880	\$ 1,897	\$ 217	\$ 217	\$ 762	\$ 767
On-balance sheet assets										
Senior securities:										
Trading account assets	\$ 467	\$ 460	\$ 26	\$ 30	\$ 35	\$ 36	\$ 91	\$ 90	\$ 64	\$ 97
Debt securities carried at fair value	9,194	9,381	234	246	1,454	1,470	124	125	—	—
Held-to-maturity securities	6,028	6,170	—	—	—	—	—	—	560	528
All other assets	—	—	3	3	38	37	2	2	37	40
Total retained positions	\$ 15,689	\$ 16,011	\$ 263	\$ 279	\$ 1,527	\$ 1,543	\$ 217	\$ 217	\$ 661	\$ 665
Principal balance outstanding ⁽²⁾	\$ 182,968	\$ 187,512	\$ 8,285	\$ 8,954	\$ 8,565	\$ 8,719	\$ 22,661	\$ 23,467	\$ 44,621	\$ 43,593

Consolidated VIEs

Maximum loss exposure ⁽¹⁾	\$ 12,316	\$ 13,296	\$ 7	\$ 7	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 76
On-balance sheet assets										
Trading account assets	\$ 716	\$ 1,318	\$ 143	\$ 150	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 76
Loans and leases, net	11,467	11,858	—	—	—	—	—	—	—	—
All other assets	146	143	—	—	—	—	—	—	—	—
Total assets	\$ 12,329	\$ 13,319	\$ 143	\$ 150	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 76
Total liabilities	\$ 16	\$ 26	\$ 136	\$ 143	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —

⁽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 1.1 – Commitments and Contingencies and Note 1.5 – Fair Value Measurements.

⁽²⁾ Principal balance outstanding includes loans where the Corporation was the transferor to securitization VIEs 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, credit card and other asset-backed VIEs in which the Corporation held a variable interest at March 31, 2019 and December 31, 2018.

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

	Home Equity ⁽¹⁾		Credit Card ^(2, 3)		Resecuritization Trusts		Municipal Bond Trusts	
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018	March 31 2019	December 31 2018
(Dollars in millions)								
Unconsolidated VIEs								
Maximum loss exposure	\$ 855	\$ 908	\$ —	\$ —	\$ 7,755	\$ 7,647	\$ 2,296	\$ 2,150
On-balance sheet assets								
Senior securities ⁽⁴⁾ :								
Trading account assets	\$ —	\$ —	\$ —	\$ —	\$ 1,700	\$ 1,419	\$ —	\$ 26
Debt securities carried at fair value	26	27	—	—	1,297	1,337	—	—
Held-to-maturity securities	—	—	—	—	4,758	4,891	—	—
Total retained positions	\$ 26	\$ 27	\$ —	\$ —	\$ 7,755	\$ 7,647	\$ —	\$ 26
Total assets of VIEs ⁽⁵⁾	\$ 1,710	\$ 1,813	\$ —	\$ —	\$ 17,440	\$ 16,949	\$ 2,947	\$ 2,829
Consolidated VIEs								
Maximum loss exposure	\$ 79	\$ 85	\$ 19,452	\$ 18,800	\$ 49	\$ 128	\$ 2,380	\$ 1,540
On-balance sheet assets								
Trading account assets	\$ —	\$ —	\$ —	\$ —	\$ 69	\$ 366	\$ 2,391	\$ 1,553
Loans and leases	123	133	28,062	29,906	—	—	—	—
Allowance for loan and lease losses	(4)	(5)	(874)	(901)	—	—	—	—
All other assets	4	4	131	136	—	—	1	1
Total assets	\$ 123	\$ 132	\$ 27,319	\$ 29,141	\$ 69	\$ 366	\$ 2,392	\$ 1,554
On-balance sheet liabilities								
Short-term borrowings	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 1,547	\$ 742
Long-term debt	51	55	7,852	10,321	20	238	12	12
All other liabilities	—	—	15	20	—	—	—	—
Total liabilities	\$ 51	\$ 55	\$ 7,867	\$ 10,341	\$ 20	\$ 238	\$ 1,559	\$ 754

- ⁽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 11 – Commitments and Contingencies*.
- ⁽²⁾ At March 31, 2019 and December 31, 2018, loans and leases in the consolidated credit card trust included \$12.1 billion and \$11.0 billion of seller's interest.
- ⁽³⁾ At March 31, 2019 and December 31, 2018, all other assets in the consolidated credit card trust included certain short-term investments and unbilled accrued interest and fees.
- ⁽⁴⁾ The retained senior securities were valued using quoted market prices or observable market inputs (Level 2 of the fair value hierarchy).
- ⁽⁵⁾ Total assets of VIEs includes loans the Corporation transferred with which it has continuing involvement, which may include servicing the loan.

Home Equity Loans

The Corporation retains interests, primarily senior securities, in home equity securitization trusts to which it transferred home equity loans. 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 portion of the home equity lines of credit, 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 subordinate interests in accrued interest and fees on the securitized receivables and cash reserve accounts.

During the three months ended March 31, 2018, there were \$1.6 billion of new senior debt securities issued to third-party investors from the credit card securitization trust. None were issued in the three months ended March 31, 2019.

At March 31, 2019 and December 31, 2018, the Corporation held subordinate securities issued by the credit card securitization trust with a notional principal amount of \$7.3 billion and \$7.7 billion. These securities serve as a form of credit enhancement to the senior debt securities and have a stated interest rate of zero percent. During the three months ended March 31, 2018, there were \$254 million of these subordinate securities issued. None were issued in the three months ended March 31, 2019.

Resecuritization Trusts

The Corporation transfers securities, typically MBS, into resecuritization VIEs 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 \$4.4 billion and \$6.7 billion of securities during the three months ended March 31, 2019 and 2018. Securities transferred into resecuritization VIEs were measured at fair value with changes in fair value recorded in trading account income prior to the resecuritization and, accordingly, no gain or loss on sale was recorded. Resecuritization proceeds included securities with an initial fair value of \$1.3 billion during both the three months ended March 31, 2019 and 2018. Substantially all of the other 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 \$2.3 billion and \$2.1 billion at March 31, 2019 and December 31, 2018. The weighted-average remaining life of bonds held in the trusts at March 31, 2019 was 7.3 years. There were no material write-downs or downgrades of assets or issuers during the three months ended March 31, 2019 and 2018.

Other Variable Interest Entities

The table below summarizes select information related to other VIEs in which the Corporation held a variable interest at March 31, 2019 and December 31, 2018.

Other VIEs

	Consolidated	Unconsolidated	Total	Consolidated	Unconsolidated	Total
(Dollars in millions)	March 31, 2019			December 31, 2018		
Maximum loss exposure	\$ 3,950	\$ 24,383	\$ 28,333	\$ 4,177	\$ 24,498	\$ 28,675
On-balance sheet assets						
Trading account assets	\$ 2,134	\$ 890	\$ 3,024	\$ 2,335	\$ 860	\$ 3,195
Debt securities carried at fair value	—	82	82	—	84	84
Loans and leases	1,872	4,086	5,958	1,949	3,940	5,889
Allowance for loan and lease losses	(2)	(30)	(32)	(2)	(30)	(32)
All other assets	50	18,993	19,043	53	18,885	18,938
Total	\$ 4,054	\$ 24,021	\$ 28,075	\$ 4,335	\$ 23,739	\$ 28,074
On-balance sheet liabilities						
Long-term debt	\$ 98	\$ —	\$ 98	\$ 152	\$ —	\$ 152
All other liabilities	7	3,982	3,989	7	4,231	4,238
Total	\$ 105	\$ 3,982	\$ 4,087	\$ 159	\$ 4,231	\$ 4,390
Total assets of VIEs	\$ 4,054	\$ 92,018	\$ 96,072	\$ 4,335	\$ 94,746	\$ 99,081

Customer VIEs

Customer VIEs include credit-linked, equity-linked and commodity-linked note VIEs, repackaging VIEs and asset acquisition VIEs, 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 VIEs totaled \$2.0 billion and \$2.1 billion at March 31, 2019 and December 31, 2018, 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 VIEs.

Collateralized Debt Obligation VIEs

The Corporation receives fees for structuring CDO VIEs, which hold diversified pools of fixed-income securities, typically corporate debt or ABS, which the CDO VIEs 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 \$319 million and \$421 million at March 31, 2019 and December 31, 2018.

Investment VIEs

The Corporation sponsors, invests in or provides financing, which may be in connection with the sale of assets, to a variety of investment VIEs 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 March 31, 2019 and December 31, 2018, the Corporation's consolidated investment VIEs had total assets of \$188 million and \$270 million. The Corporation also held investments in unconsolidated VIEs with total assets of \$34.9 billion and \$37.7 billion at March 31, 2019 and December 31, 2018. The Corporation's maximum loss exposure associated with both consolidated and unconsolidated investment VIEs totaled \$7.3 billion and \$7.2 billion at March 31, 2019 and December 31, 2018 comprised primarily of on-balance sheet assets less non-recourse liabilities.

Leveraged Lease Trusts

The Corporation's net investment in consolidated leveraged lease trusts totaled \$1.8 billion at both March 31, 2019 and December 31, 2018. 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.

NOTE 8 Goodwill and Intangible Assets

Goodwill

The table below presents goodwill balances by business segment and *All Other* at March 31, 2019 and December 31, 2018. The reporting units utilized for goodwill impairment testing are the operating segments or one level below. For more information, see *Note 8 – Goodwill and Intangible Assets* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Goodwill

(Dollars in millions)	March 31 2019	December 31 2018
Consumer Banking	\$ 30,123	\$ 30,123
Global Wealth & Investment Management	9,677	9,677
Global Banking	23,923	23,923
Global Markets	5,182	5,182
All Other	46	46
Total goodwill	\$ 68,951	\$ 68,951

Intangible Assets

At March 31, 2019 and December 31, 2018, the net carrying value of intangible assets was \$1.7 billion and \$1.8 billion. Both periods included \$1.6 billion of intangible assets associated with trade names, of which \$1.5 billion and \$1.6 billion at March 31, 2019 and December 31, 2018 had an indefinite life and, accordingly, were not being amortized. Amortization of intangibles expense was \$26 million and \$135 million for the three months ended March 31, 2019 and 2018.

Tax Credit VIEs

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 VIE. 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 \$16.8 billion and \$17.0 billion at March 31, 2019 and December 31, 2018. 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 \$8.7 billion and \$8.9 billion, including unfunded commitments to provide capital contributions of \$3.7 billion and \$3.8 billion at March 31, 2019 and December 31, 2018. 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 \$280 million and \$248 million and reported pretax losses in other income of \$248 million and \$208 million for the three months ended March 31, 2019 and 2018. 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 9 Leases

The Corporation enters into both lessor and lessee arrangements. For more information on lease accounting, see Note 1 – Summary of Significant Accounting Principles and on lease financing receivables, see Note 5 – Outstanding Loans and Leases.

Lessor Arrangements

The Corporation's lessor arrangements primarily consist of operating, sales-type and direct financing leases for equipment. Lease agreements may include options to renew and for the lessee to purchase the leased equipment at the end of the lease term.

At March 31, 2019, the total net investment in sales-type and direct financing leases was \$22.6 billion, comprised of \$20.3 billion in lease receivables and \$2.3 billion in unguaranteed residuals. In certain cases, the Corporation obtains third-party residual value insurance to reduce its residual asset risk. The carrying value of residual assets with third-party residual value insurance for at least a portion of the asset value was \$3.4 billion.

For the three months ended March 31, 2019, total lease income was \$426 million, consisting of \$205 million from sales-type and direct financing leases and \$221 million from operating leases.

Lessee Arrangements

The Corporation's lessee arrangements predominantly consist of operating leases for premises and equipment; the Corporation's financing leases are not significant. Right-of-use assets were \$9.6 billion and lease liabilities were \$9.9 billion at March 31, 2019. The weighted-average discount rate used to calculate the present value of future minimum lease payments was four percent.

Lease terms may contain renewal and extension options and early termination features. Generally, these options do not impact the lease term because the Corporation is not reasonably certain that it will exercise the options. The weighted-average lease term was 7.8 years at March 31, 2019.

The table below provides the components of lease cost and supplemental information for the three months ended March 31, 2019.

Lease Cost and Supplemental Information

(Dollars in millions)	Three Months Ended March 31, 2019	
Operating lease cost	\$	519
Variable lease cost (1)		127
Total lease cost (2)	\$	646
Right-of-use assets obtained in exchange for new operating lease liabilities (3)	\$	385
Operating cash flows from operating leases (4)		501

(1) Primarily consists of payments for common area maintenance and property taxes.

(2) Amounts are recorded in occupancy and equipment expense in the Consolidated Statement of Income.

(3) Represents non-cash activity and, accordingly, is not reflected in the Consolidated Statement of Cash Flows.

(4) Represents cash paid for amounts included in the measurement of lease liabilities.

Maturity Analysis

The maturities of lessor and lessee arrangements outstanding at March 31, 2019 are presented in the table below based on undiscounted cash flows.

Maturities of Lessor and Lessee Arrangements

	Lessor		Lessee (1)	
	Operating Leases	Sales-type and Direct Financing Leases (2)	Operating Leases	
(Dollars in millions)	March 31, 2019			
Remainder of 2019	\$ 582	\$ 4,818	\$ 1,483	
2020	680	5,689	1,854	
2021	571	4,533	1,625	
2022	479	2,634	1,346	
2023	380	1,539	1,076	
Thereafter	1,105	2,708	4,175	
Total undiscounted cash flows	\$ 3,797	\$ 21,921	\$ 11,569	
Less: Net present value adjustment		1,621	1,630	
Total (3)	\$	20,300	\$	9,929

(1) Excludes \$1.9 billion in commitments under lessee arrangements that have not yet commenced with lease terms that will begin in 2019.

(2) Includes \$16.8 billion in commercial lease financing receivables and \$3.5 billion in direct/indirect consumer lease financing receivables.

(3) Represents lease receivables for lessor arrangements and lease liabilities for lessee arrangements.

At December 31, 2018, operating lease commitments under lessee arrangements were \$2.4 billion, \$2.2 billion, \$2.0 billion, \$1.7 billion and \$1.3 billion for 2019 through 2023, respectively, and \$6.2 billion in the aggregate for all years thereafter. These amounts include variable lease payments and commitments under leases that have not yet commenced, both of which are excluded from the lessee maturity analysis presented in the table above.

NOTE 10 Federal Funds Sold or Purchased, Securities Financing Agreements, Short-term Borrowings and Restricted Cash

The table below presents federal funds sold or purchased, securities financing agreements (which include securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase) and short-term borrowings. The Corporation elects to account for certain securities financing agreements and short-term borrowings under the fair value option. For more information on the fair value option, see Note 16 – Fair Value Option.

	Amount	Rate	Amount	Rate
	Three Months Ended March 31			
	2019		2018	
(Dollars in millions)				
Federal funds sold and securities borrowed or purchased under agreements to resell				
Average during period	\$ 274,308	1.77%	\$ 248,320	1.02%
Maximum month-end balance during period	280,562	n/a	252,078	n/a
Federal funds purchased and securities loaned or sold under agreements to repurchase				
Average during period	\$ 200,154	2.44%	\$ 195,614	1.41%
Maximum month-end balance during period	200,486	n/a	191,319	n/a
Short-term borrowings				
Average during period	15,432	2.95	46,334	3.98
Maximum month-end balance during period	14,848	n/a	52,480	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. For more information on securities financing agreements and the offsetting of securities financing transactions, see Note 10 – Federal Funds Sold or Purchased, Securities Financing Agreements, Short-term Borrowings and Restricted Cash to the Consolidated Financial Statements of the Corporation’s 2018 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 March 31, 2019 and December 31, 2018. 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 3 – Derivatives.

Securities Financing Agreements

	Gross Assets/Liabilities (1)	Amounts Offset	Net Balance Sheet Amount	Financial Instruments (2)	Net Assets/Liabilities
March 31, 2019					
Securities borrowed or purchased under agreements to resell (3)	\$ 417,787	\$ (150,770)	\$ 267,017	\$ (248,930)	\$ 18,087
Securities loaned or sold under agreements to repurchase	\$ 339,221	\$ (150,770)	\$ 188,451	\$ (176,042)	\$ 12,409
Other (4)	23,267	—	23,267	(23,267)	—
Total	\$ 362,488	\$ (150,770)	\$ 211,718	\$ (199,309)	\$ 12,409
December 31, 2018					
Securities borrowed or purchased under agreements to resell (3)	\$ 366,274	\$ (106,865)	\$ 259,409	\$ (240,790)	\$ 18,619
Securities loaned or sold under agreements to repurchase	\$ 293,853	\$ (106,865)	\$ 186,988	\$ (176,740)	\$ 10,248
Other (4)	19,906	—	19,906	(19,906)	—
Total	\$ 313,759	\$ (106,865)	\$ 206,894	\$ (196,646)	\$ 10,248

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

(2) 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 \$9.6 billion and \$11.5 billion reported in loans and leases on the Consolidated Balance Sheet at March 31, 2019 and December 31, 2018.

(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 following tables 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. For more information on collateral requirements, see Note 10 – Federal Funds Sold or Purchased, Securities Financing Agreements, Short-term Borrowings and Restricted Cash to the Consolidated Financial Statements of the Corporation’s 2018 Annual Report on Form 10-K.

Remaining Contractual Maturity

	Overnight and Continuous	30 Days or Less	After 30 Days Through 90 Days	Greater than 90 Days (1)	Total
(Dollars in millions)	March 31, 2019				
Securities sold under agreements to repurchase	\$ 163,997	\$ 90,653	\$ 30,857	\$ 33,163	\$ 318,670
Securities loaned	15,363	590	912	3,686	20,551
Other	23,267	—	—	—	23,267
Total	\$ 202,627	\$ 91,243	\$ 31,769	\$ 36,849	\$ 362,488
	December 31, 2018				
Securities sold under agreements to repurchase	\$ 139,017	\$ 81,917	\$ 34,204	\$ 21,476	\$ 276,614
Securities loaned	7,753	4,197	1,783	3,506	17,239
Other	19,906	—	—	—	19,906
Total	\$ 166,676	\$ 86,114	\$ 35,987	\$ 24,982	\$ 313,759

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

Class of Collateral Pledged

	Securities Sold Under Agreements to Repurchase	Securities Loaned	Other	Total
(Dollars in millions)	March 31, 2019			
U.S. government and agency securities	\$ 188,303	\$ —	\$ —	\$ 188,303
Corporate securities, trading loans and other	11,607	4,236	300	16,143
Equity securities	12,853	12,033	22,912	47,798
Non-U.S. sovereign debt	100,562	4,282	55	104,899
Mortgage trading loans and ABS	5,345	—	—	5,345
Total	\$ 318,670	\$ 20,551	\$ 23,267	\$ 362,488
	December 31, 2018			
U.S. government and agency securities	\$ 164,664	\$ —	\$ —	\$ 164,664
Corporate securities, trading loans and other	11,400	2,163	287	13,850
Equity securities	14,090	10,869	19,572	44,531
Non-U.S. sovereign debt	81,329	4,207	47	85,583
Mortgage trading loans and ABS	5,131	—	—	5,131
Total	\$ 276,614	\$ 17,239	\$ 19,906	\$ 313,759

Restricted Cash

At March 31, 2019 and December 31, 2018, the Corporation held restricted cash included within cash and cash equivalents on the Consolidated Balance Sheet of \$21.2 billion and \$22.6 billion, predominantly related to cash held on deposit with the Federal Reserve Bank and non-U.S. central banks to meet reserve requirements and cash segregated in compliance with securities regulations.

NOTE 11 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 2018 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 following table includes the notional amount of

unfunded legally binding lending commitments net of amounts distributed (i.e., syndicated or participated) to other financial institutions. The distributed amounts were \$10.4 billion and \$10.7 billion at March 31, 2019 and December 31, 2018. At March 31, 2019, the carrying value of these commitments, excluding commitments accounted for under the fair value option, was \$820 million, including deferred revenue of \$18 million and a reserve for unfunded lending commitments of \$802 million. At December 31, 2018, the comparable amounts were \$813 million, \$16 million and \$797 million, respectively. The carrying value of these commitments is classified in accrued expenses and other liabilities on the Consolidated Balance Sheet.

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.

The table below also includes the notional amount of commitments of \$3.1 billion at both March 31, 2019 and December 31, 2018 that are accounted for under the fair value option. However, the table excludes cumulative net fair value of \$106 million and \$169 million at March 31, 2019 and December 31, 2018 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 16 – Fair Value Option*.

Credit Extension Commitments

	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
(Dollars in millions)					
March 31, 2019					
Notional amount of credit extension commitments					
Loan commitments	\$ 82,301	\$ 140,664	\$ 159,232	\$ 21,299	\$ 403,496
Home equity lines of credit	2,155	2,093	4,030	35,516	43,794
Standby letters of credit and financial guarantees (1)	20,723	9,935	2,499	1,267	34,424
Letters of credit (2)	1,047	223	58	34	1,362
Legally binding commitments	106,226	152,915	165,819	58,116	483,076
Credit card lines (3)	377,043	—	—	—	377,043
Total credit extension commitments	\$ 483,269	\$ 152,915	\$ 165,819	\$ 58,116	\$ 860,119

December 31, 2018

Notional amount of credit extension commitments					
Loan commitments	\$ 84,910	\$ 142,271	\$ 155,298	\$ 22,683	\$ 405,162
Home equity lines of credit	2,578	2,249	3,530	34,702	43,059
Standby letters of credit and financial guarantees (1)	22,571	9,702	2,457	1,074	35,804
Letters of credit (2)	1,168	84	69	57	1,378
Legally binding commitments	111,227	154,306	161,354	58,516	485,403
Credit card lines (3)	371,658	—	—	—	371,658
Total credit extension commitments	\$ 482,885	\$ 154,306	\$ 161,354	\$ 58,516	\$ 857,061

(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 \$26.6 billion and \$7.4 billion at March 31, 2019, and \$28.3 billion and \$7.1 billion at December 31, 2018. Amounts in the table include consumer SBLCs of \$390 million and \$372 million at March 31, 2019 and December 31, 2018.

(2) At March 31, 2019 and December 31, 2018, included are letters of credit of \$606 million and \$422 million related to certain liquidity commitments of VES. For additional information, see Note 7 – Securitizations and Other Variable Interest Entities.

(3) Includes business card unused lines of credit.

Other Commitments

At March 31, 2019 and December 31, 2018, the Corporation had commitments to purchase loans (e.g., residential mortgage and commercial real estate) of \$426 million and \$329 million, which upon settlement will be included in loans or LHFS, and commitments to purchase commercial loans of \$270 million and \$463 million, which upon settlement will be included in trading account assets.

At March 31, 2019 and December 31, 2018, the Corporation had commitments to purchase commodities, primarily liquefied natural gas, of \$1.1 billion and \$1.3 billion, which upon settlement will be included in trading account assets.

At March 31, 2019 and December 31, 2018, the Corporation had commitments to enter into resale and forward-dated resale and securities borrowing agreements of \$82.1 billion and \$59.7 billion, and commitments to enter into forward-dated repurchase and securities lending agreements of \$52.0 billion and \$21.2 billion. These commitments expire primarily within the next 21 months.

At March 31, 2019 and December 31, 2018, the Corporation had a commitment to originate or purchase up to \$3.1 billion and \$3.0 billion on a rolling 12-month basis, of auto loans and leases from a strategic partner. This commitment extends through November 2022 and can be terminated with 12 months prior notice.

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 March 31, 2019 and December 31, 2018, the notional amount of these guarantees totaled \$9.1 billion and \$9.8 billion. At March 31, 2019 and December 31, 2018, the Corporation's maximum exposure related to these guarantees totaled \$1.4 billion and \$1.5 billion, with estimated maturity dates between 2033 and 2039.

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. If the merchant processor fails to meet its obligation to reimburse the cardholder for disputed transactions, then the Corporation could be held liable. For the three months ended March 31, 2019 and 2018, the sponsored entities processed and settled \$205.6 billion and \$200.7 billion of transactions and recorded losses of \$4 million and \$8 million.

At March 31, 2019 and December 31, 2018, the maximum potential exposure for sponsored transactions totaled \$346.6 billion and \$348.1 billion. However, the Corporation believes that the maximum potential exposure is not representative of the actual potential loss exposure and does not expect to make material payments in connection with these guarantees.

A significant portion of our merchant processing activity is performed by a joint venture formed in 2009. At that time, the Corporation contributed its merchant processing business, valued at \$4.7 billion, in exchange for a minority ownership interest in the venture. The joint venture is accounted for as an equity method investment and reported in *All Other*. Since 2009, the carrying value of the investment has decreased to \$2.8 billion at March 31, 2019 due to cash distributions received, the Corporation's proportionate share of income and an impairment charge recorded in 2011.

The term of the joint venture is governed by various operating agreements that automatically renew in accordance with their terms unless either partner gives a written notice of termination at least one year prior to the end of the term. The current term ends in June 2020. If either partner decides to terminate the joint venture, the fair value of the Corporation's investment would no longer be based on the cash flows of the joint venture into perpetuity, but instead would be based primarily on the estimated fair value of finite-lived assets that would be received upon dissolution. That change would likely result in a material impairment of the investment.

Representations and Warranties Obligations and Corporate Guarantees

For more information on representations and warranties obligations and corporate guarantees, and the related reserve and estimated range of possible loss, see Note 12 – *Commitments and Contingencies* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

The reserve for representations and warranties obligations and corporate guarantees at March 31, 2019 and December 31, 2018 was \$1.9 billion and \$2.0 billion and is included in accrued expenses and other liabilities on the Consolidated Balance Sheet and the related provision is included in other income in the Consolidated Statement of Income. The representations and warranties reserve represents the Corporation's best estimate of probable incurred losses. It is reasonably possible that future representations and warranties losses may occur in excess of the amounts recorded for these exposures. See *Litigation and Regulatory Matters* below for the Corporation's combined range of possible loss in excess of the reserve for representations and warranties and the accrued liability for litigation.

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 \$6.1 billion and \$5.9 billion at March 31, 2019 and December 31, 2018. The estimated maturity dates of these obligations extend up to 2040. The Corporation has made no material payments under these guarantees. For more information on maximum potential future payments under VE-related liquidity commitments, see Note 7 – *Securitizations and Other Variable Interest Entities*.

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.

Guarantees of Certain Long-term Debt

The Corporation, as the parent company, fully and unconditionally guarantees the securities issued by BofA Finance LLC, a 100 percent owned finance subsidiary of the Corporation, and effectively provides for the full and unconditional guarantee of trust securities issued by certain statutory trust companies that are 100 percent owned finance subsidiaries of the Corporation.

Litigation and Regulatory Matters

The following disclosure supplements Note 12 – *Commitments and Contingencies* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K, collectively the commitments and contingencies disclosures.

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 the eventual outcome of the pending matters, the timing of the ultimate resolution of these matters, or any eventual loss, fines or penalties related to each pending matter.

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. Excluding expenses of internal and external legal service providers, litigation-related expense of \$73 million and \$116 million was recognized for the three months ended March 31, 2019 and 2018.

For a limited number of the matters disclosed in the commitments and contingencies disclosures 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. With respect to such matters, in cases in which the Corporation possesses sufficient appropriate information to estimate a range of possible loss, that estimate is aggregated and disclosed below. There may be other disclosed matters for which a loss is probable or reasonably possible but such an estimate of the range of possible loss may not be possible. For those disclosed matters where an estimate of the range of possible loss is possible, as well as for representations and warranties exposures, management currently estimates the aggregate range of reasonably possible loss for these exposures is \$0 to \$1.9 billion in excess of the accrued liability, if any. This estimated range of possible loss is based upon currently available information and is subject to significant judgment and a variety of assumptions, and known and unknown uncertainties. The matters underlying the estimated range will change from time to time, and actual results may vary significantly from the current estimate. Therefore, this estimated range of possible loss represents what the Corporation believes to be an estimate of possible loss only for certain matters meeting these criteria. It does not represent the Corporation's maximum loss exposure.

Information is provided in the commitments and contingencies disclosures regarding the nature of the litigation 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 commitments and contingencies disclosures, 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.

Investigations of Precious Metals Trading

Two individuals formerly employed by Merrill Lynch Commodities, Inc. (MLCI) were previously indicted in the U.S. District Court for the Northern District of Illinois for conduct that the U.S. Department of Justice (DOJ) alleges is a precious metals futures price manipulation scheme in violation of various laws, including statutes prohibiting commodities fraud. The DOJ and the U.S. Commodity Futures Trading Commission are continuing investigations of precious metals market trading practices, primarily during the period 2009-2014, including with respect to potential liability of MLCI. The Corporation continues to cooperate with these investigations. A resolution of these investigations may impose monetary penalties and remedial actions.

NOTE 12 Shareholders' Equity

Common Stock

Declared Quarterly Cash Dividends on Common Stock (1)

Declaration Date	Record Date	Payment Date	Dividend Per Share
April 24, 2019	June 7, 2019	June 28, 2019	\$ 0.15
January 30, 2019	March 1, 2019	March 29, 2019	0.15

(1) In 2019, and through April 26, 2019.

On February 7, 2019, following approval by the Federal Reserve, the Board authorized the repurchase of an additional \$2.5 billion of common stock through June 30, 2019. This common stock repurchase authorization includes only common stock.

During the three months ended March 31, 2019, the Corporation repurchased and retired 220 million shares of common stock in connection with the 2018 Comprehensive Capital Analysis and Review (CCAR) capital plan. These repurchases reduced shareholders' equity by \$6.3 billion.

During the three months ended March 31, 2019, in connection with employee stock plans, the Corporation issued 83 million shares of its common stock and, to satisfy tax withholding obligations, repurchased 32 million shares of its common stock. At March 31, 2019, the Corporation had reserved 443 million unissued shares of common stock for future issuances under employee stock plans, convertible notes and preferred stock.

Preferred Stock

During the three months ended March 31, 2019, the Corporation declared \$442 million of cash dividends on preferred stock. There were no issuances or redemptions of preferred stock during the three months ended March 31, 2019.

NOTE 13 Earnings Per Common Share

The calculation of earnings per common share (EPS) and diluted EPS for the three months ended March 31, 2019 and 2018 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 2018 Annual Report on Form 10-K.

	Three Months Ended March 31	
	2019	2018
(In millions, except per share information)		
Earnings per common share		
Net income	\$ 7,311	\$ 6,918
Preferred stock dividends	(442)	(428)
Net income applicable to common shareholders	\$ 6,869	\$ 6,490
Average common shares issued and outstanding	9,725.9	10,322.4
Earnings per common share	\$ 0.71	\$ 0.63
Diluted earnings per common share		
Net income applicable to common shareholders	\$ 6,869	\$ 6,490
Average common shares issued and outstanding	9,725.9	10,322.4
Dilutive potential common shares (1)	61.4	150.3
Total diluted average common shares issued and outstanding	9,787.3	10,472.7
Diluted earnings per common share	\$ 0.70	\$ 0.62

(1) Includes incremental dilutive shares from RSUs, restricted stock and warrants.

For both the three months ended March 31, 2019 and 2018, 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 months ended March 31, 2018, average options to purchase seven 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. For the three months

Restricted Stock Units

During the three months ended March 31, 2019, the Corporation granted 94 million restricted stock unit (RSU) awards to certain employees under the Bank of America Corporation Key Employee Equity Plan. These awards were authorized to settle predominantly in shares of common stock of the Corporation and will be expensed based on the grant-date fair value of the shares. Certain RSUs will be settled in cash or contain settlement provisions that subject these awards to variable accounting whereby compensation expense is adjusted to fair value based on changes in the share price of the Corporation's common stock up to the settlement date. Of the RSUs granted, 71 million will vest predominantly over three years with most vesting in one-third increments on each of the first three anniversaries of the grant date provided that the employee remains continuously employed with the Corporation during that time, and will be expensed ratably over the vesting period, net of estimated forfeitures, for non-retirement eligible employees. For RSUs granted to employees who are retirement eligible, the awards are deemed authorized as of the beginning of the year preceding the grant date when the incentive award plans are generally approved. As a result, the estimated value is expensed ratably over the year preceding the grant date. Additionally, 23 million of the RSUs granted will vest predominantly over four years with most vesting in one-fourth increments on each of the first four anniversaries of the grant date provided that the employee remains continuously employed with the Corporation during that time, and will be expensed ratably over the vesting period, net of estimated forfeitures. For additional information, see Note 18 – Stock-based Compensation Plans to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

ended March 31, 2018, average warrants to purchase 122 million shares of common stock were included in the computation of EPS under the treasury stock method. These warrants expired on October 29, 2018. For the three months ended March 31, 2019 and 2018, average warrants to purchase 14 million and 142 million shares of common stock were included in the diluted EPS calculation under the treasury stock method. Substantially all of these warrants were exercised on or before their expiration date of January 16, 2019.

NOTE 14 Accumulated Other Comprehensive Income (Loss)

The table below presents the changes in accumulated OCI after-tax for the three months ended March 31, 2019 and 2018.

(Dollars in millions)	Debt and Equity Securities	Debit Valuation Adjustments	Derivatives	Employee Benefit Plans	Foreign Currency	Total
Balance, December 31, 2017	\$ (1,206)	\$ (1,060)	\$ (831)	\$ (3,192)	\$ (793)	\$ (7,082)
Accounting change related to certain tax effects (1)	(393)	(220)	(189)	(707)	239	(1,270)
Cumulative adjustment for hedge accounting change (2)	—	—	57	—	—	57
Net change	(3,963)	273	(275)	30	(48)	(3,963)
Balance, March 31, 2018	\$ (5,562)	\$ (1,007)	\$ (1,238)	\$ (3,869)	\$ (602)	\$ (12,278)
Balance, December 31, 2018	\$ (5,552)	\$ (531)	\$ (1,016)	\$ (4,304)	\$ (808)	\$ (12,211)
Net change	2,309	(363)	229	28	(34)	2,169
Balance, March 31, 2019	\$ (3,243)	\$ (894)	\$ (787)	\$ (4,276)	\$ (842)	\$ (10,042)

(1) Effective January 1, 2018, the Corporation adopted the accounting standard on tax effects in accumulated OCI related to the Tax Act. Accordingly, certain tax effects were reclassified from accumulated OCI to retained earnings.

(2) Effective January 1, 2018, the Corporation adopted the hedge accounting standard. Accordingly, an insignificant cumulative effect adjustment was recognized in retained earnings.

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 pre- and after-tax for the three months ended March 31, 2019 and 2018.

(Dollars in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
	Three Months Ended March 31					
	2019			2018		
Debt and equity securities:						
Net increase (decrease) in fair value	\$ 3,075	\$ (763)	\$ 2,312	\$ (5,323)	\$ 1,360	\$ (3,963)
Net realized (gains) reclassified into earnings (1)	(4)	1	(3)	(2)	2	—
Net change	3,071	(762)	2,309	(5,325)	1,362	(3,963)
Debit valuation adjustments:						
Net increase (decrease) in fair value	(475)	110	(365)	342	(82)	260
Net realized losses reclassified into earnings (1)	3	(1)	2	17	(4)	13
Net change	(472)	109	(363)	359	(86)	273
Derivatives:						
Net increase (decrease) in fair value	264	(52)	212	(424)	131	(293)
Reclassifications into earnings:						
Net interest income	23	(6)	17	50	(12)	38
Compensation and benefits expense	—	—	—	(27)	7	(20)
Net realized losses reclassified into earnings	23	(6)	17	23	(5)	18
Net change	287	(58)	229	(401)	126	(275)
Employee benefit plans:						
Net actuarial losses and other reclassified into earnings (2)	35	(7)	28	41	(11)	30
Net change	35	(7)	28	41	(11)	30
Foreign currency:						
Net (decrease) in fair value	5	(39)	(34)	(81)	33	(48)
Net change	5	(39)	(34)	(81)	33	(48)
Total other comprehensive income (loss)	\$ 2,926	\$ (757)	\$ 2,169	\$ (5,407)	\$ 1,424	\$ (3,983)

(1) Reclassifications of pretax debt and equity securities, DVA and foreign currency (gains) losses are recorded in other income in the Consolidated Statement of Income.

(2) Reclassifications of pretax employee benefit plan costs are recorded in other general operating expense in the Consolidated Statement of Income.

NOTE 15 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 made if the significant inputs used in the financial models measuring the fair values of the assets and liabilities become unobservable or observable in the current marketplace. During the three months ended March 31, 2019, 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, how the Corporation measures fair value and valuation techniques, see Note 1 – Summary of Significant Accounting Principles and Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K. The Corporation accounts for certain financial instruments under the fair value option. For additional information, see Note 16 – Fair Value Option.

Recurring Fair Value

Assets and liabilities carried at fair value on a recurring basis at March 31, 2019 and December 31, 2018, including financial instruments that the Corporation accounts for under the fair value option, are summarized in the following tables.

	March 31, 2019					
	Fair Value Measurements					
(Dollars in millions)	Level 1	Level 2	Level 3	Netting Adjustments (1)	Assets/Liabilities at Fair Value	
Assets						
Time deposits placed and other short-term investments	\$ 1,180	\$ —	\$ —	\$ —	\$ 1,180	
Federal funds sold and securities borrowed or purchased under agreements to resell	—	59,557	—	—	59,557	
Trading account assets:						
U.S. Treasury and agency securities (2)	41,904	450	—	—	42,354	
Corporate securities, trading loans and other	—	28,254	1,428	—	29,682	
Equity securities	63,520	35,570	288	—	99,378	
Non-U.S. sovereign debt	8,470	24,068	472	—	33,010	
Mortgage trading loans, MBS and ABS:						
U.S. government-sponsored agency guaranteed (2)	—	23,539	—	—	23,539	
Mortgage trading loans, ABS and other MBS	—	9,589	1,510	—	11,099	
Total trading account assets (3)	113,894	121,470	3,698	—	239,062	
Derivative assets	12,581	312,097	3,473	(285,760)	42,391	
AFS debt securities:						
U.S. Treasury and agency securities	59,800	1,224	—	—	61,024	
Mortgage-backed securities:						
Agency	—	117,165	—	—	117,165	
Agency-collateralized mortgage obligations	—	5,379	—	—	5,379	
Non-agency residential	—	1,434	581	—	2,015	
Commercial	—	14,369	—	—	14,369	
Non-U.S. securities	—	10,760	2	—	10,762	
Other taxable securities	—	3,430	3	—	3,433	
Tax-exempt securities	—	17,466	—	—	17,466	
Total AFS debt securities	59,800	171,227	586	—	231,613	
Other debt securities carried at fair value:						
Agency MBS	—	1,013	—	—	1,013	
Non-agency residential MBS	—	1,414	224	—	1,638	
Non-U.S. securities	3,369	4,320	—	—	7,689	
Other taxable securities	—	3	—	—	3	
Total other debt securities carried at fair value	3,369	6,750	224	—	10,343	
Loans and leases	—	5,870	317	—	6,187	
Loans held-for-sale	—	1,989	558	—	2,547	
Other assets (4)	17,784	2,396	2,749	—	22,929	
Total assets (5)	\$ 208,608	\$ 681,356	\$ 11,605	\$ (285,760)	\$ 615,809	
Liabilities						
Interest-bearing deposits in U.S. offices	\$ —	\$ 499	\$ —	\$ —	\$ 499	
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	26,609	—	—	26,609	
Trading account liabilities:						
U.S. Treasury and agency securities	11,539	610	—	—	12,149	
Equity securities	37,038	3,155	—	—	40,193	
Non-U.S. sovereign debt	16,206	9,234	—	—	25,440	
Corporate securities and other	—	6,607	21	—	6,628	
Total trading account liabilities	64,783	19,606	21	—	84,410	
Derivative liabilities	11,907	301,867	4,491	(281,927)	36,338	
Short-term borrowings	—	1,895	—	—	1,895	
Accrued expenses and other liabilities	20,821	2,552	—	—	23,373	
Long-term debt	—	30,735	890	—	31,625	
Total liabilities (5)	\$ 97,511	\$ 383,763	\$ 5,402	\$ (281,927)	\$ 204,749	

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes \$24.0 billion of GSE obligations.

(3) Includes securities with a fair value of \$15.7 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) Includes MBSs of \$1.9 billion which are classified as Level 3 assets.

(5) Total recurring Level 3 assets were 0.49 percent of total consolidated assets, and total recurring Level 3 liabilities were 0.26 percent of total consolidated liabilities.

	December 31, 2018					
	Fair Value Measurements					Assets/Liabilities at Fair Value
(Dollars in millions)	Level 1	Level 2	Level 3	Netting Adjustments (1)		
Assets						
Time deposits placed and other short-term investments	\$ 1,214	\$ —	\$ —	\$ —		\$ 1,214
Federal funds sold and securities borrowed or purchased under agreements to resell	—	56,399	—	—		56,399
Trading account assets:						
U.S. Treasury and agency securities (2)	53,131	1,593	—	—		54,724
Corporate securities, trading loans and other	—	24,630	1,558	—		26,188
Equity securities	53,840	23,163	276	—		77,279
Non-U.S. sovereign debt	5,818	19,210	465	—		25,493
Mortgage trading loans, MBS and ABS:						
U.S. government-sponsored agency guaranteed (2)	—	19,586	—	—		19,586
Mortgage trading loans, ABS and other MBS	—	9,443	1,635	—		11,078
Total trading account assets (3)	112,789	97,625	3,934	—		214,348
Derivative assets	9,967	315,413	3,466	(285,121)		43,725
AFS debt securities:						
U.S. Treasury and agency securities	53,663	1,260	—	—		54,923
Mortgage-backed securities:						
Agency	—	121,826	—	—		121,826
Agency-collateralized mortgage obligations	—	5,530	—	—		5,530
Non-agency residential	—	1,320	597	—		1,917
Commercial	—	14,078	—	—		14,078
Non-U.S. securities	—	9,304	2	—		9,306
Other taxable securities	—	4,403	7	—		4,410
Tax-exempt securities	—	17,376	—	—		17,376
Total AFS debt securities	53,663	175,097	606	—		229,366
Other debt securities carried at fair value:						
U.S. Treasury and agency securities	1,282	—	—	—		1,282
Non-agency residential MBS	—	1,434	172	—		1,606
Non-U.S. securities	490	5,354	—	—		5,844
Other taxable securities	—	3	—	—		3
Total other debt securities carried at fair value	1,772	6,791	172	—		8,735
Loans and leases	—	4,011	338	—		4,349
Loans held-for-sale	—	2,400	542	—		2,942
Other assets (4)	15,032	1,775	2,932	—		19,739
Total assets (5)	\$ 194,437	\$ 659,511	\$ 11,990	\$ (285,121)	\$	580,817
Liabilities						
Interest-bearing deposits in U.S. offices	\$ —	\$ 492	\$ —	\$ —		\$ 492
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	28,875	—	—		28,875
Trading account liabilities:						
U.S. Treasury and agency securities	7,894	761	—	—		8,655
Equity securities	33,739	4,070	—	—		37,809
Non-U.S. sovereign debt	7,452	9,182	—	—		16,634
Corporate securities and other	—	5,104	18	—		5,122
Total trading account liabilities	49,085	19,117	18	—		68,220
Derivative liabilities	9,931	303,441	4,401	(279,882)		37,891
Short-term borrowings	—	1,648	—	—		1,648
Accrued expenses and other liabilities	18,096	1,979	—	—		20,075
Long-term debt	—	26,872	817	—		27,689
Total liabilities (5)	\$ 77,112	\$ 382,424	\$ 5,236	\$ (279,882)	\$	184,890

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes \$20.2 billion of GSE obligations.

(3) Includes securities with a fair value of \$16.6 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) Includes MBSs of \$2.0 billion which are classified as Level 3 assets.

(5) Total recurring Level 3 assets were 0.51 percent of total consolidated assets, and total recurring Level 3 liabilities were 0.25 percent of total consolidated liabilities.

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 months ended March 31, 2019 and 2018, including net realized and unrealized gains (losses) included in earnings and accumulated OCI. Transfers into Level 3 occur primarily due to decreased price observability, and transfers out of Level 3 occur primarily due to increased price observability. 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.

Level 3 – Fair Value Measurements (1)

(Dollars in millions)	Gross							Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance March 31	Change in Unrealized Gains (Losses) in Net Income Related to Financial Instruments Still Held ⁽²⁾
	Balance January 1	Total Realized/Unrealized Gains (Losses) in Net Income ⁽²⁾	Gains (Losses) in OCI ⁽³⁾	Purchases	Sales	Issuances	Settlements				
Three Months Ended March 31, 2019											
Trading account assets:											
Corporate securities, trading loans and other	\$ 1,558	\$ 3	\$ —	\$ 54	\$ (73)	\$ —	\$ (60)	\$ 139	\$ (193)	\$ 1,428	\$ (8)
Equity securities	276	2	—	18	(1)	—	(3)	2	(6)	288	2
Non-U.S. sovereign debt	465	8	(1)	—	—	—	—	—	—	472	8
Mortgage trading loans, ABS and other MBS	1,635	38	(1)	230	(337)	—	(9)	89	(135)	1,510	27
Total trading account assets	3,934	51	(2)	302	(411)	—	(72)	230	(334)	3,698	29
Net derivative assets ⁽⁴⁾	(935)	(25)	—	111	(245)	—	(55)	122	9	(1,018)	(25)
AFS debt securities:											
Non-agency residential MBS	597	—	93	—	—	—	(7)	159	(261)	581	—
Non-U.S. securities	2	—	—	—	—	—	—	—	—	2	—
Other taxable securities	7	—	—	—	—	—	(4)	—	—	3	—
Total AFS debt securities	606	—	93	—	—	—	(11)	159	(261)	586	—
Other debt securities carried at fair value – Non-agency residential MBS	172	47	—	—	—	—	(1)	38	(32)	224	47
Loans and leases ⁽⁵⁾	338	4	—	—	(15)	—	(10)	—	—	317	4
Loans held-for-sale ^(5, 6)	542	12	(2)	10	(21)	11	(53)	59	—	558	4
Other assets ^(6, 7)	2,932	(74)	8	—	—	41	(158)	—	—	2,749	(128)
Trading account liabilities – Corporate securities and other	(18)	—	—	—	(3)	—	—	—	—	(21)	—
Long-term debt ⁽⁵⁾	(817)	(46)	(1)	—	—	(3)	38	(61)	—	(890)	(46)
Three Months Ended March 31, 2018											
Trading account assets:											
Corporate securities, trading loans and other	\$ 1,864	\$ 9	\$ —	\$ 193	\$ (136)	\$ —	\$ (139)	\$ 103	\$ (178)	\$ 1,716	\$ (15)
Equity securities	235	8	—	6	(7)	—	—	1	(31)	212	8
Non-U.S. sovereign debt	556	16	2	—	(50)	—	(8)	—	(115)	401	16
Mortgage trading loans, ABS and other MBS	1,498	99	3	125	(320)	—	(69)	94	(58)	1,372	83
Total trading account assets	4,153	132	5	324	(513)	—	(216)	198	(382)	3,701	92
Net derivative assets ⁽⁴⁾	(1,714)	495	—	153	(262)	—	202	71	(83)	(1,138)	517
AFS debt securities:											
Mortgage-backed securities:											
Non-U.S. securities	25	—	—	—	—	—	(2)	—	—	23	—
Other taxable securities	509	1	—	—	—	—	(7)	—	(460)	43	—
Tax-exempt securities	469	—	—	—	—	—	—	—	(469)	—	—
Total AFS debt securities ⁽⁵⁾	1,003	1	—	—	—	—	(9)	—	(929)	66	—
Loans and leases ⁽⁵⁾	571	(16)	—	—	(4)	—	(25)	—	—	526	(16)
Loans held-for-sale ^(5, 6)	690	24	—	12	—	—	(41)	—	—	685	21
Other assets ^(6, 7, 8)	2,425	192	—	—	(38)	29	(242)	929	—	3,295	120
Trading account liabilities – Corporate securities and other	(24)	1	—	—	(2)	(1)	—	—	—	(26)	1
Accrued expenses and other liabilities ⁽⁵⁾	(8)	—	—	—	—	—	—	—	—	(8)	—
Long-term debt ⁽⁵⁾	(1,863)	23	1	5	—	(67)	172	(33)	411	(1,351)	26

(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 – predominantly trading account income; Net derivative assets – primarily trading account income and other income; Other debt securities carried at fair value – other income; Loans and leases – other income; Loans held-for-sale – other income; Other assets – primarily other income related to MBSs; Long-term debt – primarily trading account income. For MBSs, 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 unrealized gains (losses) in OCI on AFS debt 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. Total gains (losses) in OCI include net unrealized gains of \$96 million related to financial instruments still held at March 31, 2019. For additional information on changes in fair value recorded in accumulated OCI, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

(4) Net derivative assets include derivative assets of \$3.5 billion and \$4.5 billion and derivative liabilities of \$4.5 billion and \$5.7 billion at March 31, 2019 and 2018.

(5) Amounts represent instruments that are accounted for under the fair value option.

(6) Issuances represent loan originations and MBSs recognized following securitizations or whole loan sales.

(7) Settlements primarily represent the net change in fair value of the MBS asset due to the recognition of modeled cash flows and the passage of time.

(8) Transfers out of AFS debt and into other assets relate to the reclassification of certain securities.

The following tables present information about significant unobservable inputs related to the Corporation's material categories of Level 3 financial assets and liabilities at March 31, 2019 and December 31, 2018.

Quantitative Information about Level 3 Fair Value Measurements at March 31, 2019

(Dollars in millions)

(Dollars in millions)

		Inputs				
Financial Instrument	Fair Value	Valuation Technique	Significant Unobservable Inputs	Ranges of Inputs	Weighted Average ⁽¹⁾	
Loans and Securities ⁽²⁾						
Instruments backed by residential real estate assets	\$ 1,583	Discounted cash flow, Market comparables	Yield	0% to 25%	6%	
Trading account assets – Mortgage trading loans, ABS and other MBS	455		Prepayment speed	0% to 25% CPR	15%	
Loans and leases	317		Default rate	0% to 3% CDR	1%	
Loans held-for-sale	1		Loss severity	0% to 48%	15%	
AFS debt securities, primarily non-agency residential	586		Price	\$0 to \$150	\$100	
Other debt securities carried at fair value - Non-agency residential	224					
Instruments backed by commercial real estate assets	\$ 355	Discounted cash flow	Yield	0% to 25%	7%	
Trading account assets – Corporate securities, trading loans and other	232		Price	\$0 to \$100	\$71	
Trading account assets – Mortgage trading loans, ABS and other MBS	123					
Commercial loans, debt securities and other	\$ 3,157	Discounted cash flow, Market comparables	Yield	1% to 15%	7%	
Trading account assets – Corporate securities, trading loans and other	1,196		Prepayment speed	10% to 20%	15%	
Trading account assets – Non-U.S. sovereign debt	472		Default rate	3% to 4%	4%	
Trading account assets – Mortgage trading loans, ABS and other MBS	932		Loss severity	35% to 40%	37%	
Loans held-for-sale	557		Price	\$0 to \$143	\$66	
Other assets, primarily auction rate securities	\$ 878	Discounted cash flow, Market comparables	Price	\$10 to \$100	\$95	
MSRs	\$ 1,871		Discounted cash flow	Weighted-average life, fixed rate ⁽⁵⁾	0 to 14 years	5 years
				Weighted-average life, variable rate ⁽⁵⁾	0 to 9 years	3 years
				Option-adjusted spread, fixed rate	7% to 14%	9%
		Option-adjusted spread, variable rate		9% to 15%	12%	
Structured liabilities						
Long-term debt	\$ (890)	Discounted cash flow, Market comparables, Industry standard derivative pricing ⁽³⁾	Equity correlation	10% to 100%	65%	
			Long-dated equity volatilities	4% to 91%	31%	
			Price	\$0 to \$101	\$71	
Net derivative assets						
Credit derivatives	\$ (197)	Discounted cash flow, Stochastic recovery correlation model	Yield	3% to 5%	4%	
			Upfront points	0 to 100 points	68 points	
			Prepayment speed	15% to 100% CPR	38%	
			Default rate	1% to 4% CDR	2%	
			Loss severity	35%	n/a	
			Price	\$0 to \$138	\$85	
Equity derivatives	\$ (802)	Industry standard derivative pricing ⁽³⁾	Equity correlation	10% to 100%	65%	
			Long-dated equity volatilities	4% to 91%	31%	
Commodity derivatives	\$ 6	Discounted cash flow, Industry standard derivative pricing ⁽³⁾	Natural gas forward price	\$1/MMBtu to \$8/MMBtu	\$3/MMBtu	
			Correlation	25% to 85%	67%	
			Volatilities	15% to 115%	34%	
Interest rate derivatives	\$ (25)	Industry standard derivative pricing ⁽⁴⁾	Correlation (IR/IR)	15% to 70%	54%	
			Correlation (FX/IR)	0% to 46%	3%	
			Long-dated inflation rates	-18% to 38%	4%	
			Long-dated inflation volatilities	0% to 1%	1%	
Total net derivative assets	\$ (1,018)					

⁽¹⁾ For loans and securities, structured liabilities and net derivative assets, the weighted average is calculated based upon the absolute fair value of the instruments.

⁽²⁾ 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 79: Trading account assets – Corporate securities, trading loans and other of \$1.4 billion, Trading account assets – Non-U.S. sovereign debt of \$472 million, Trading account assets – Mortgage trading loans, ABS and other MBS of \$1.5 billion, AFS debt securities of \$586 million, Other debt securities carried at fair value - Non-agency residential of \$224 million, Other assets, including MSRs, of \$2.7 billion, Loans and leases of \$317 million and LHFS of \$558 million.

⁽³⁾ Includes models such as Monte Carlo simulation and Black-Scholes.

⁽⁴⁾ Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.

⁽⁵⁾ 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, 2018

(Dollars in millions)

(Dollars in millions)		Inputs			
Financial Instrument	Fair Value	Valuation Technique	Significant Unobservable Inputs	Ranges of Inputs	Weighted Average ⁽¹⁾
Loans and Securities ⁽²⁾					
Instruments backed by residential real estate assets	\$ 1,536	Discounted cash flow, Market comparables	Yield	0% to 25%	8%
Trading account assets – Mortgage trading loans, ABS and other MBS	419		Prepayment speed	0% to 21% CPR	12%
Loans and leases	338		Default rate	0% to 3% CDR	1%
Loans held-for-sale	1		Loss severity	0% to 51%	17%
AFS debt securities, primarily non-agency residential	606		Price	\$0 to \$128	\$72
Other debt securities carried at fair value - Non-agency residential	172				
Instruments backed by commercial real estate assets	\$ 291	Discounted cash flow	Yield	0% to 25%	7%
Trading account assets – Corporate securities, trading loans and other	200		Price	\$0 to \$100	\$79
Trading account assets – Mortgage trading loans, ABS and other MBS	91				
Commercial loans, debt securities and other	\$ 3,489	Discounted cash flow, Market comparables	Yield	1% to 18%	13%
Trading account assets – Corporate securities, trading loans and other	1,358		Prepayment speed	10% to 20%	15%
Trading account assets – Non-U.S. sovereign debt	465		Default rate	3% to 4%	4%
Trading account assets – Mortgage trading loans, ABS and other MBS	1,125		Loss severity	35% to 40%	38%
Loans held-for-sale	541		Price	\$0 to \$141	\$68
Other assets, primarily auction rate securities	\$ 890	Discounted cash flow, Market comparables	Price	\$10 to \$100	\$95
MSRs	\$ 2,042	Discounted cash flow	Weighted-average life, fixed rate ⁽⁵⁾	0 to 14 years	5 years
			Weighted-average life, variable rate ⁽⁵⁾	0 to 10 years	3 years
			Option-adjusted spread, fixed rate	7% to 14%	9%
			Option-adjusted spread, variable rate	9% to 15%	12%
Structured liabilities					
Long-term debt	\$ (817)	Discounted cash flow, Market comparables, Industry standard derivative pricing ⁽³⁾	Equity correlation	11% to 100%	67%
			Long-dated equity volatilities	4% to 84%	32%
			Yield	7% to 18%	16%
			Price	\$0 to \$100	\$72
Net derivative assets					
Credit derivatives	\$ (565)	Discounted cash flow, Stochastic recovery correlation model	Yield	0% to 5%	4%
			Upfront points	0 points to 100 points	70 points
			Credit correlation	70%	n/a
			Prepayment speed	15% to 20% CPR	15%
			Default rate	1% to 4% CDR	2%
			Loss severity	35%	n/a
			Price	\$0 to \$138	\$93
Equity derivatives	\$ (348)	Industry standard derivative pricing ⁽³⁾	Equity correlation	11% to 100%	67%
			Long-dated equity volatilities	4% to 84%	32%
Commodity derivatives	\$ 10	Discounted cash flow, Industry standard derivative pricing ⁽³⁾	Natural gas forward price	\$1/MMBtu to \$12/MMBtu	\$3/MMBtu
			Correlation	38% to 87%	71%
			Volatilities	15% to 132%	38%
Interest rate derivatives	\$ (32)	Industry standard derivative pricing ⁽⁴⁾	Correlation (IR/IR)	15% to 70%	61%
			Correlation (FX/IR)	0% to 46%	1%
			Long-dated inflation rates	-20% to 38%	2%
			Long-dated inflation volatilities	0% to 1%	1%
Total net derivative assets	\$ (935)				

⁽¹⁾ For loans and securities, structured liabilities and net derivative assets, the weighted average is calculated based upon the absolute fair value of the instruments.

⁽²⁾ 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 80: Trading account assets – Corporate securities, trading loans and other of \$1.6 billion, Trading account assets – Non-U.S. sovereign debt of \$465 million, Trading account assets – Mortgage trading loans, ABS and other MBS of \$1.6 billion, AFS debt securities of \$606 million, Other debt securities carried at fair value - Non-agency residential of \$172 million, Other assets, including MSRs, of 2.9 billion, Loans and leases of \$338 million and LHFS of \$542 million.

⁽³⁾ Includes models such as Monte Carlo simulation and Black-Scholes.

⁽⁴⁾ Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.

⁽⁵⁾ 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

Uncertainty of Fair Value Measurements from Unobservable Inputs

For information on the types of instruments, valuation approaches and the impact of changes in unobservable inputs used in Level 3 measurements, see Note 20 – *Fair Value Measurements* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Sensitivity of Fair Value Measurements for 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, as of March 31, 2019, a 10 percent or 20 percent decrease in prepayment rates, which impacts the weighted-average life, could result in an increase in fair value of \$64 million

or \$134 million, while a 10 percent or 20 percent increase in prepayment rates could result in a decrease in fair value of \$59 million or \$114 million. A 100 bp or 200 bp decrease in option-adjusted spread (OAS) levels could result in an increase in fair value of \$55 million or \$114 million, while a 100 bp or 200 bp increase in OAS levels could result in a decrease in fair value of \$52 million or \$100 million. These sensitivities are hypothetical and actual amounts may vary materially. For additional information on variations in assumptions and sensitivities on MSRs, see Note 20 – *Fair Value Measurements* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

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 months ended March 31, 2019 and 2018.

Assets Measured at Fair Value on a Nonrecurring Basis

	March 31, 2019		Three Months Ended March 31, 2019	
	Level 2	Level 3	Gains (Losses)	
(Dollars in millions)				
Assets				
Loans held-for-sale	\$ 55	\$ —	\$	(1)
Loans and leases (1)	—	120		(40)
Foreclosed properties (2, 3)	—	40		(13)
Other assets	61	6		(11)
	March 31, 2018		Three Months Ended March 31, 2018	
Assets				
Loans held-for-sale	\$ 13	\$ —	\$	(2)
Loans and leases (1)	—	273		(98)
Foreclosed properties (2, 3)	—	61		(17)
Other assets	47	—		(7)

(1) Includes \$18 million and \$45 million of losses on loans that were written down to a collateral value of zero during the three months ended March 31, 2019 and 2018.

(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 recorded during the first 90 days after transfer of a loan to foreclosed properties.

(3) Includes \$400 million and \$680 million of properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans) at March 31, 2019 and 2018.

The table below presents information about significant unobservable inputs related to the Corporation's nonrecurring Level 3 financial assets and liabilities at March 31, 2019 and December 31, 2018. 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

Financial Instrument	Fair Value	Valuation Technique	Inputs		
			Significant Unobservable Inputs	Ranges of Inputs	Weighted Average (1)
(Dollars in millions)					
			March 31, 2019		
Loans and leases backed by residential real estate assets	\$ 120	Market comparables	OREO discount	13% to 59%	25%
			Costs to sell	8% to 26%	9%
			December 31, 2018		
Loans and leases backed by residential real estate assets	\$ 474	Market comparables	OREO discount	13% to 59%	25%
			Costs to sell	8% to 26%	9%

(1) The weighted average is calculated based upon the fair value of the loans.

NOTE 16 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 2018 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 March 31, 2019 and December 31, 2018, 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 months ended March 31, 2019 and 2018.

Fair Value Option Elections

	March 31, 2019			December 31, 2018		
	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal
(Dollars in millions)						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ 59,557	\$ 59,524	\$ 33	\$ 56,399	\$ 56,376	\$ 23
Loans reported as trading account assets (1)	6,346	13,438	(7,092)	6,195	13,088	(6,893)
Trading inventory – other	16,322	n/a	n/a	13,778	n/a	n/a
Consumer and commercial loans	6,187	6,220	(33)	4,349	4,399	(50)
Loans held-for-sale (1)	2,547	3,799	(1,252)	2,942	4,749	(1,807)
Other assets	3	n/a	n/a	3	n/a	n/a
Long-term deposits	499	447	52	492	454	38
Federal funds purchased and securities loaned or sold under agreements to repurchase	26,609	26,614	(5)	28,875	28,881	(6)
Short-term borrowings	1,895	1,895	—	1,648	1,648	—
Unfunded loan commitments	106	n/a	n/a	169	n/a	n/a
Long-term debt (2)	31,625	31,990	(365)	27,689	29,198	(1,509)

(1) A significant portion of the loans reported as trading account assets and LHFS are distressed loans that 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 \$31.3 billion and \$27.3 billion, and contractual principal outstanding of \$31.6 billion and \$28.8 billion at March 31, 2019 and December 31, 2018.

n/a = not applicable

Gains (Losses) Relating to Assets and Liabilities Accounted for Under the Fair Value Option

	Three Months Ended March 31					
	2019			2018		
	Trading Account Income	Other Income	Total	Trading Account Income	Other Income	Total
(Dollars in millions)						
Loans reported as trading account assets (1)	\$ 91	\$ —	\$ 91	\$ 103	\$ —	\$ 103
Trading inventory – other (2)	2,544	—	2,544	595	—	595
Consumer and commercial loans (1)	1	18	19	106	(21)	85
Long-term debt (3, 4)	(1,080)	(23)	(1,103)	819	(41)	778
Other (5)	11	86	97	8	8	16
Total	\$ 1,567	\$ 81	\$ 1,648	\$ 1,631	\$ (54)	\$ 1,577

(1) Gains (losses) related to borrower-specific credit risk were not significant.

(2) The gains in trading account income are primarily offset by losses on trading liabilities that hedge these assets.

(3) The majority of the net gains (losses) in trading account income relate to the embedded derivatives 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 accumulated OCI, see *Note 14 – Accumulated Other Comprehensive Income (Loss)*. For more information on how the Corporation's own credit spread is determined, see *Note 20 – Fair Value Measurements* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

(5) Includes gains (losses) on federal funds sold and securities borrowed or purchased under agreements to resell, LHFS, long-term deposits, federal funds purchased and securities loaned or sold under agreements to repurchase, short-term borrowings and unfunded loan commitments.

NOTE 17 Fair Value of Financial Instruments

The following disclosures include financial instruments that are not carried at fair value or only a portion of the ending balance is carried at fair value on the Consolidated Balance Sheet. Certain loans, deposits, long-term debt and unfunded lending commitments are accounted for under the fair value option. For additional information, see *Note 21 – Fair Value Option* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Fair Value of Financial Instruments

The carrying values and fair values by fair value hierarchy of certain financial instruments where only a portion of the ending balance was carried at fair value at March 31, 2019 and December 31, 2018 are presented in the following table.

Fair Value of Financial Instruments

(Dollars in millions)	Carrying Value	Fair Value		
		Level 2	Level 3	Total
		March 31, 2019		
Financial assets				
Loans	\$ 915,899	\$ 60,803	\$ 880,868	\$ 941,671
Loans held-for-sale	6,297	5,525	776	6,301
Financial liabilities				
Deposits (1)	1,379,337	1,379,240	—	1,379,240
Long-term debt	233,929	239,490	890	240,380
Commercial unfunded lending commitments (2)	908	106	4,747	4,853
December 31, 2018				
Financial assets				
Loans	\$ 911,520	\$ 58,228	\$ 859,160	\$ 917,388
Loans held-for-sale	10,367	9,592	775	10,367
Financial liabilities				
Deposits (1)	1,381,476	1,381,239	—	1,381,239
Long-term debt	229,392	230,019	817	230,836
Commercial unfunded lending commitments (2)	966	169	5,568	5,727

(1) Includes demand deposits of \$517.6 billion and \$531.9 billion with no stated maturities at March 31, 2019 and December 31, 2018.

(2) The carrying value of commercial unfunded lending commitments is included in accrued expenses and other liabilities on the Consolidated Balance Sheet. The Corporation does not estimate the fair value of consumer unfunded lending commitments because, in many instances, the Corporation can reduce or cancel these commitments by providing notice to the borrower. For more information on commitments, see Note 1.1 – Commitments and Contingencies.

NOTE 18 Business Segment Information

The Corporation reports its results of operations through the following four business segments: *Consumer Banking*, *Global Wealth & Investment Management*, *Global Banking* and *Global Markets*, with the remaining operations recorded in *All Other*. For additional information, see Note 23 – *Business Segment Information* to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K. The following table presents net income (loss) and the components thereto (with

net interest income on an FTE basis for the business segments, *All Other* and the total Corporation) for the three months ended March 31, 2019 and 2018, and total assets at March 31, 2019 and 2018 for each business segment, as well as *All Other*, including a reconciliation of the four business segments' total revenue, net of interest expense, on an FTE basis, and net income to the Consolidated Statement of Income, and total assets to the Consolidated Balance Sheet.

Results of Business Segments and All Other

At and for the three months ended March 31	Total Corporation (1)		Consumer Banking		Global Wealth & Investment Management	
	2019	2018	2019	2018	2019	2018
	(Dollars in millions)					
Net interest income	\$ 12,528	\$ 11,919	\$ 7,106	\$ 6,477	\$ 1,684	\$ 1,584
Noninterest income	10,629	11,301	2,526	2,503	3,136	3,272
Total revenue, net of interest expense	23,157	23,220	9,632	8,980	4,820	4,856
Provision for credit losses	1,013	834	974	935	5	38
Noninterest expense	13,224	13,842	4,359	4,548	3,426	3,580
Income before income taxes	8,920	8,544	4,299	3,497	1,389	1,238
Income tax expense	1,609	1,626	1,053	893	340	316
Net income	\$ 7,311	\$ 6,918	\$ 3,246	\$ 2,604	\$ 1,049	\$ 922
Period-end total assets	\$ 2,377,164	\$ 2,328,478	\$ 794,510	\$ 774,257	\$ 296,785	\$ 279,332
	Global Banking		Global Markets		All Other	
	2019	2018	2019	2018	2019	2018
	(Dollars in millions)					
Net interest income	\$ 2,790	\$ 2,679	\$ 953	\$ 1,020	\$ (5)	\$ 159
Noninterest income	2,365	2,316	3,228	3,792	(626)	(582)
Total revenue, net of interest expense	5,155	4,995	4,181	4,812	(631)	(423)
Provision for credit losses	111	16	(23)	(3)	(54)	(152)
Noninterest expense	2,266	2,291	2,755	2,923	418	500
Income before income taxes	2,778	2,688	1,449	1,892	(995)	(771)
Income tax expense	750	699	413	492	(947)	(774)
Net income	\$ 2,028	\$ 1,989	\$ 1,036	\$ 1,400	\$ (48)	\$ 3
Period-end total assets	\$ 436,066	\$ 425,328	\$ 671,123	\$ 648,605	\$ 178,680	\$ 200,966

(1) There were no material intersegment revenues.

The table below presents noninterest income and the components thereto for the three months ended March 31, 2019 and 2018 for each business segment, *All Other* and the total Corporation. For more information, see Note 2 – *Net Interest Income and Noninterest Income*.

Noninterest Income by Business Segment and All Other

	Total Corporation		Consumer Banking		Global Wealth & Investment Management	
	Three Months Ended March 31					
(Dollars in millions)	2019	2018	2019	2018	2019	2018
Fees and commissions:						
Card income						
Interchange fees	\$ 896	\$ 914	\$ 728	\$ 758	\$ 17	\$ 10
Other card income	479	488	469	476	9	11
Total card income	1,375	1,402	1,197	1,234	26	21
Service charges						
Deposit-related fees	1,580	1,646	1,020	1,044	18	19
Lending-related fees	259	275	—	—	—	—
Total service charges	1,839	1,921	1,020	1,044	18	19
Investment and brokerage services						
Asset management fees	2,440	2,564	34	36	2,414	2,528
Brokerage fees	920	1,100	39	46	428	512
Total investment and brokerage services	3,360	3,664	73	82	2,842	3,040
Investment banking fees						
Underwriting income	666	740	—	—	80	84
Syndication fees	255	317	—	—	—	—
Financial advisory services	343	296	—	—	—	—
Total investment banking fees	1,264	1,353	—	—	80	84
Total fees and commissions income	7,838	8,340	2,290	2,360	2,966	3,164
Trading account income	2,338	2,553	2	2	34	29
Other income	453	408	234	141	136	79
Total noninterest income	\$ 10,629	\$ 11,301	\$ 2,526	\$ 2,503	\$ 3,136	\$ 3,272

	Global Banking		Global Markets		All Other (1)	
	Three Months Ended March 31					
	2019	2018	2019	2018	2019	2018
Fees and commissions:						
Card income						
Interchange fees	\$ 129	\$ 127	\$ 21	\$ 20	\$ 1	\$ (1)
Other card income	2	1	(1)	—	—	—
Total card income	131	128	20	20	1	(1)
Service charges						
Deposit-related fees	498	538	38	40	6	5
Lending-related fees	215	225	44	50	—	—
Total service charges	713	763	82	90	6	5
Investment and brokerage services						
Asset management fees	—	—	—	—	(8)	—
Brokerage fees	9	25	444	488	—	29
Total investment and brokerage services	9	25	444	488	(8)	29
Investment banking fees						
Underwriting income	280	310	367	430	(61)	(84)
Syndication fees	126	158	130	159	(1)	—
Financial advisory services	303	276	40	20	—	—
Total investment banking income	709	744	537	609	(62)	(84)
Total fees and commissions fees	1,562	1,660	1,083	1,207	(63)	(51)
Trading account income	50	61	2,082	2,557	170	(96)
Other income	753	595	63	28	(733)	(435)
Total noninterest income	\$ 2,365	\$ 2,316	\$ 3,228	\$ 3,792	\$ (626)	\$ (582)

(1) *All Other* includes eliminations of intercompany transactions.

Business Segment Reconciliations

	Three Months Ended March 31	
	2019	2018
(Dollars in millions)		
Segments' total revenue, net of interest expense	\$ 23,788	\$ 23,643
Adjustments (1):		
ALM activities	12	26
Liquidating businesses, eliminations and other	(643)	(449)
FTE basis adjustment	(153)	(150)
Consolidated revenue, net of interest expense	\$ 23,004	\$ 23,070
Segments' total net income	7,359	6,915
Adjustments, net-of-tax (1):		
ALM activities	18	28
Liquidating businesses, eliminations and other	(66)	(25)
Consolidated net income	\$ 7,311	\$ 6,918

	March 31	
	2019	2018
Segments' total assets	\$ 2,198,484	\$ 2,127,522
Adjustments (1):		
ALM activities, including securities portfolio	671,751	659,849
Elimination of segment asset allocations to match liabilities	(566,787)	(543,322)
Other	73,716	84,429
Consolidated total assets	\$ 2,377,164	\$ 2,328,478

(1) Adjustments include consolidated income, expense and asset amounts not specifically allocated to individual business segments.

Glossary

Alt-A Mortgage – A type of U.S. mortgage that is considered riskier than A-paper, or “prime,” and less risky than “subprime,” the riskiest category. Typically, Alt-A mortgages are characterized by borrowers with less than full documentation, lower credit scores and higher LTVs.

Assets Under Management (AUM) – The total market value of assets under the investment advisory and/or discretion of GWIM which generate asset management fees based on a percentage of the assets' market values. AUM reflects assets that are generally managed for institutional, high net worth and retail clients, and are distributed through various investment products including mutual funds, other commingled vehicles and separate accounts.

Banking Book – All on- and off-balance sheet financial instruments of the Corporation except for those positions that are held for trading purposes.

Brokerage and Other Assets – Non-discretionary client assets which are held in brokerage accounts or held for safekeeping.

Committed Credit Exposure – Any funded portion of a facility plus the unfunded portion of a facility on which the lender is legally bound to advance funds during a specified period under prescribed conditions.

Credit Derivatives – Contractual agreements that provide protection against a specified credit event on one or more referenced obligations.

Credit Valuation Adjustment (CVA) – A portfolio adjustment required to properly reflect the counterparty credit risk exposure as part of the fair value of derivative instruments.

Debit Valuation Adjustment (DVA) – A portfolio adjustment required to properly reflect the Corporation's own credit risk exposure as part of the fair value of derivative instruments and/or structured liabilities.

Funding Valuation Adjustment (FVA) – A portfolio adjustment required to include funding costs on uncollateralized derivatives and derivatives where the Corporation is not permitted to use the collateral it receives.

Interest Rate Lock Commitment (IRLC) – Commitment with a loan applicant in which the loan terms are guaranteed for a designated period of time subject to credit approval.

Letter of Credit – A document issued on behalf of a customer to a third party promising to pay the third party upon presentation of specified documents. A letter of credit effectively substitutes the issuer's credit for that of the customer.

Loan-to-value (LTV) – A commonly used credit quality metric. LTV is calculated as the outstanding carrying value of the loan divided by the estimated value of the property securing the loan.

Margin Receivable – An extension of credit secured by eligible securities in certain brokerage accounts.

Matched Book – Repurchase and resale agreements or securities borrowed and loaned transactions where the overall asset and liability position is similar in size and/or maturity. Generally, these are entered into to accommodate customers where the Corporation earns the interest rate spread.

Mortgage Servicing Rights (MSR) – The right to service a mortgage loan when the underlying loan is sold or securitized. Servicing includes collections for principal, interest and escrow payments from borrowers and accounting for and remitting principal and interest payments to investors.

Net Interest Yield – Net interest income divided by average total interest-earning assets.

Nonperforming Loans and Leases – Includes loans and leases that have been placed on nonaccrual status, including nonaccruing loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties.

Operating Margin – Income before income taxes divided by total revenue, net of interest expense.

Prompt Corrective Action (PCA) – A framework established by the U.S. banking regulators requiring banks to maintain certain levels of regulatory capital ratios, comprised of five categories of capitalization: “well capitalized,” “adequately capitalized,” “undercapitalized,” “significantly undercapitalized” and “critically undercapitalized.” Insured depository institutions that fail to meet certain of these capital levels are subject to increasingly strict limits on their activities, including their ability to make capital distributions, pay management compensation, grow assets and take other actions.

Subprime Loans – Although a standard industry definition for subprime loans (including subprime mortgage loans) does not exist, the Corporation defines subprime loans as specific product offerings for higher risk borrowers.

Troubled Debt Restructurings (TDRs) – Loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties. Certain consumer loans for which a binding offer to restructure has been extended are also classified as TDRs.

Value-at-Risk (VaR) – VaR is a model that simulates the value of a portfolio under a range of hypothetical scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss the portfolio is expected to experience with a given confidence level based on historical data. A VaR model is an effective tool in estimating ranges of potential gains and losses on our trading portfolios.

Acronyms

ABS	Asset-backed securities	HQLA	High Quality Liquid Assets
AFS	Available-for-sale	HTM	Held-to-maturity
ALM	Asset and liability management	IRLC	Interest rate lock commitment
AUM	Assets under management	ISDA	International Swaps and Derivatives Association, Inc.
BAMLI DAC	Bank of America Merrill Lynch International Designated Activity Company	LCR	Liquidity Coverage Ratio
BANA	Bank of America, National Association	LHFS	Loans held-for-sale
BHC	Bank holding company	LIBOR	London InterBank Offered Rate
BofASE	BofA Securities Europe SA	LTV	Loan-to-value
bps	basis points	MBS	Mortgage-backed securities
CCAR	Comprehensive Capital Analysis and Review	MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
CDO	Collateralized debt obligation	MLGWM	Merrill Lynch Global Wealth Management
CET1	Common equity tier 1	MLI	Merrill Lynch International
CLTV	Combined loan-to-value	MLPCC	Merrill Lynch Professional Clearing Corp
CVA	Credit valuation adjustment	MLPF&S	Merrill Lynch, Pierce, Fenner & Smith Incorporated
DVA	Debit valuation adjustment	MSA	Metropolitan Statistical Area
EPS	Earnings per common share	MSR	Mortgage servicing right
EU	European Union	OAS	Option-adjusted spread
FDIC	Federal Deposit Insurance Corporation	OCI	Other comprehensive income
FHA	Federal Housing Administration	OREO	Other real estate owned
FHLB	Federal Home Loan Bank	OTC	Over-the-counter
FHLMC	Freddie Mac	OTTI	Other-than-temporary impairment
FICC	Fixed-income, currencies and commodities	PCA	Prompt Corrective Action
FICO	Fair Isaac Corporation (credit score)	PCI	Purchased credit-impaired
FNMA	Fannie Mae	RMBS	Residential mortgage-backed securities
FTE	Fully taxable-equivalent	RSU	Restricted stock unit
FVA	Funding valuation adjustment	SBLC	Standby letter of credit
GAAP	Accounting principles generally accepted in the United States of America	SEC	Securities and Exchange Commission
GLS	Global Liquidity Sources	SLR	Supplementary leverage ratio
GNMA	Government National Mortgage Association	TDR	Troubled debt restructurings
GSE	Government-sponsored enterprise	TLAC	Total loss-absorbing capacity
G-SIB	Global systemically important bank	VaR	Value-at-Risk
GWIM	Global Wealth & Investment Management	VIE	Variable interest entity
HELOC	Home equity line of credit		

Part II. Other Information

Bank of America Corporation and Subsidiaries

Item 1. Legal Proceedings

See Litigation and Regulatory Matters in Note 11 – Commitments and Contingencies to the Consolidated Financial Statements, which is incorporated by reference in this Item 1, for litigation and regulatory disclosure that supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2018 Annual Report on Form 10-K.

Item 1A. Risk Factors

There are no material changes from the risk factors set forth under Part 1, Item 1A. Risk Factors of the Corporation's 2018 Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The table below presents share repurchase activity for the three months ended March 31, 2019. The primary source of funds for cash distributions by the Corporation to its shareholders is dividends received from its banking subsidiaries. Each of the banking subsidiaries is subject to various regulatory policies and requirements relating to the payment of dividends, including requirements to maintain capital above regulatory minimums. All of the Corporation's preferred stock outstanding has preference over the Corporation's common stock with respect to payment of dividends.

	Total Common Shares Repurchased (1)	Weighted-Average Per Share Price	Total Shares Purchased as Part of Publicly Announced Programs	Remaining Buyback Authority Amounts (2)
(Dollars in millions, except per share information; shares in thousands)				
January 1- 31, 2019	61,447	\$ 27.51	61,437	\$ 8,594
February 1- 28, 2019	107,054	28.89	77,345	8,867
March 1- 31, 2019	83,151	28.89	81,188	6,521
Three months ended March 31, 2019	251,652	28.55	219,970	

⁽¹⁾ Includes shares of the Corporation's common stock acquired by the Corporation in connection with satisfaction of tax withholding obligations on vested restricted stock or restricted stock units and certain forfeitures and terminations of employment-related awards and for potential re-issuance to certain employees under equity incentive plans.

⁽²⁾ On June 28, 2018, following the Federal Reserve's non-objection to our 2018 CCAR capital plan, the Board authorized the repurchase of approximately \$20.6 billion in common stock from July 1, 2018 through June 30, 2019, including approximately \$600 million to offset the effect of equity-based compensation plans during the same period. On February 7, 2019, the Corporation announced that the Board authorized the repurchase of an additional \$2.5 billion of common stock during the first and second quarters of 2019. Amounts shown include this additional repurchase authority. During the three months ended March 31, 2019, pursuant to the Board's authorization, the Corporation repurchased \$6.3 billion of common stock, which included common stock to offset equity-based compensation awards. For additional information, see Capital Management – CCAR and Capital Planning on page 16 and Note 12 – Shareholders' Equity to the Consolidated Financial Statements.

The Corporation did not have any unregistered sales of equity securities during the three months ended March 31, 2019.

Item 6. Exhibits

Exhibit No.	Description	Notes	Incorporated by Reference			
			Form	Exhibit	Filing Date	File No.
3(a)	Amended and Restated Certificate of Incorporation as in effect on the date hereof		10-Q	3(a)	7/30/18	1-6523
3(b)	Amended and Restated Bylaws of the Corporation as in effect on the date hereof		8-K	3.1	3/20/15	1-6523
10(a)	Form of Time-Based Restricted Stock Units Award Agreement (February 2019) between the Corporation and certain executive officers of the Corporation, including certain Named Executive Officers	1,2				
10(b)	Form of Performance Restricted Stock Units Award Agreement (February 2019) between the Corporation and certain executive officers of the Corporation, including certain Named Executive Officers	1,2				
10(c)	ESA Retention Agreement dated March 15, 2004 between the Corporation and Dean C. Athanasia	1,2				
11	Earnings Per Share Computation – included in Note 13 – Earnings Per Common Share to the Consolidated Financial Statements	1				
31(a)	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	1				
31(b)	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	1				
32(a)	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	1				
32(b)	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	1				
101.INS	XBRL Instance Document	3				
101.SCH	XBRL Taxonomy Extension Schema Document	1				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	1				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	1				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	1				
101.DEF	XBRL Taxonomy Extension Definitions Linkbase Document	1				

(1) Filed herewith.

(2) Exhibit is a management contract or compensatory plan or arrangement.

(3) The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Bank of America Corporation

Registrant

Date: April 26, 2019

/s/ Rudolf A. Bless

Rudolf A. Bless

Chief Accounting Officer