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 June 30, 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 001-2979

WELLS FARGO & COMPANY
(Exact name of registrant as specified in its charter)

Delaware	No. 41-0449260
(State of incorporation)	(I.R.S. Employer Identification No.)

420 Montgomery Street, San Francisco, California 94163
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **1-866-249-3302**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, par value $1-2/3	WFC	NYSE
7.5% Non-Cumulative Perpetual Convertible Class A Preferred Stock, Series L	WFC.PRL	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series N	WFC.PRN	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series O	WFC.PRO	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series P	WFC.PRP	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of 5.85% Fixed-to-Floating Rate Non-Cumulative Perpetual Class A Preferred Stock, Series Q	WFC.PRQ	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of 6.625% Fixed-to-Floating Rate Non-Cumulative Perpetual Class A Preferred Stock, Series R	WFC.PRR	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series T	WFC.PRT	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series V	WFC.PRV	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series W	WFC.PRW	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series X	WFC.PRX	NYSE
Depositary Shares, each representing a 1/1000th interest in a share of Non-Cumulative Perpetual Class A Preferred Stock, Series Y	WFC.PRY	NYSE
Guarantee of 5.80% Fixed-to-Floating Rate Normal Wachovia Income Trust Securities of Wachovia Capital Trust III	WBTP	NYSE
Guarantee of Medium-Term Notes, Series A, due October 30, 2028 of Wells Fargo Finance LLC	WFC/28A	NYSE

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 Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

	Shares Outstanding July 24, 2019
Common stock, $1-2/3 par value	4,406,107,022

FORM 10-Q
CROSS-REFERENCE INDEX

PART I - FINANCIAL INFORMATION

FINANCIAL REVIEW

Summary Financial Data

				% Change				
			Quarter ended	Jun 30, 2019 from		Six months ended		
($ in millions, except per share amounts)	**Jun 30, 2019**	Mar 31, 2019	Jun 30, 2018	Mar 31, 2019	Jun 30, 2018	**Jun 30, 2019**	Jun 30, 2018	% Change
For the Period								
Wells Fargo net income	**$ 6,206**	5,860	5,186	6%	20	**$ 12,066**	10,322	17%
Wells Fargo net income applicable to common stock	**5,848**	5,507	4,792	6	22	**11,355**	9,525	19
Diluted earnings per common share	**1.30**	1.20	0.98	8	33	**2.50**	1.94	29
Profitability ratios (annualized):								
Wells Fargo net income to average assets (ROA)	**1.31%**	1.26	1.10	4	19	**1.29%**	1.10	17
Wells Fargo net income applicable to common stock to average Wells Fargo common stockholders' equity (ROE)	**13.26**	12.71	10.60	4	25	**12.99**	10.59	23
Return on average tangible common equity (ROTCE) (1)	**15.78**	15.16	12.62	4	25	**15.47**	12.62	23
Efficiency ratio (2)	**62.3**	64.4	64.9	(3)	(4)	**63.4**	66.7	(5)
Total revenue	**$ 21,584**	21,609	21,553	—	—	**$ 43,193**	43,487	(1)
Pre-tax pre-provision profit (PTPP) (3)	**8,135**	7,693	7,571	6	7	**15,828**	14,463	9
Dividends declared per common share	**0.45**	0.45	0.39	—	15	**0.90**	0.78	15
Average common shares outstanding	**4,469.4**	4,551.5	4,865.8	(2)	(8)	**4,510.2**	4,875.7	(7)
Diluted average common shares outstanding	**4,495.0**	4,584.0	4,899.8	(2)	(8)	**4,540.1**	4,916.1	(8)
Average loans	**$ 947,460**	950,010	944,079	—	—	**$ 948,728**	947,532	—
Average assets	**1,900,627**	1,883,091	1,884,884	1	1	**1,891,907**	1,900,304	—
Average total deposits	**1,268,979**	1,262,062	1,271,339	1	—	**1,265,539**	1,284,187	(1)
Average consumer and small business banking deposits (4)	**742,671**	739,654	754,047	—	(2)	**741,171**	754,898	(2)
Net interest margin	**2.82%**	2.91	2.93	(3)	(4)	**2.86%**	2.89	(1)
At Period End								
Debt securities	**$ 482,067**	483,467	475,495	—	1	**$ 482,067**	475,495	1
Loans	**949,878**	948,249	944,265	—	1	**949,878**	944,265	1
Allowance for loan losses	**9,692**	9,900	10,193	(2)	(5)	**9,692**	10,193	(5)
Goodwill	**26,415**	26,420	26,429	—	—	**26,415**	26,429	—
Equity securities	**61,537**	58,440	57,505	5	7	**61,537**	57,505	7
Assets	**1,923,388**	1,887,792	1,879,700	2	2	**1,923,388**	1,879,700	2
Deposits	**1,288,426**	1,264,013	1,268,864	2	2	**1,288,426**	1,268,864	2
Common stockholders' equity	**177,235**	176,025	181,386	1	(2)	**177,235**	181,386	(2)
Wells Fargo stockholders' equity	**199,042**	197,832	205,188	1	(3)	**199,042**	205,188	(3)
Total equity	**200,037**	198,733	206,069	1	(3)	**200,037**	206,069	(3)
Tangible common equity (1)	**148,864**	147,723	152,580	1	(2)	**148,864**	152,580	(2)
Capital ratios (5):								
Total equity to assets	**10.40%**	10.53	10.96	(1)	(5)	**10.40%**	10.96	(5)
Risk-based capital:								
Common Equity Tier 1	**11.97**	11.92	11.98	—	—	**11.97**	11.98	—
Tier 1 capital	**13.69**	13.64	13.83	—	(1)	**13.69**	13.83	(1)
Total capital	**16.75**	16.74	16.98	—	(1)	**16.75**	16.98	(1)
Tier 1 leverage	**9.12**	9.15	9.51	—	(4)	**9.12**	9.51	(4)
Common shares outstanding	**4,419.6**	4,511.9	4,849.1	(2)	(9)	**4,419.6**	4,849.1	(9)
Book value per common share (6)	**$ 40.10**	39.01	37.41	3	7	**$ 40.10**	37.41	7
Tangible book value per common share (1)(6)	**33.68**	32.74	31.47	3	7	**33.68**	31.47	7
Team members (active, full-time equivalent)	**262,800**	262,100	264,500	—	(1)	**262,800**	264,500	(1)

(1) Tangible common equity is a non-GAAP financial measure and represents total equity less preferred equity, noncontrolling interests, and goodwill and certain identifiable intangible assets (including goodwill and intangible assets associated with certain of our nonmarketable equity securities, but excluding mortgage servicing rights), net of applicable deferred taxes. The methodology of determining tangible common equity may differ among companies. Management believes that return on average tangible common equity and tangible book value per common share, which utilize tangible common equity, are useful financial measures because they enable investors and others to assess the Company's use of equity. For additional information, including a corresponding reconciliation to GAAP financial measures, see the "Capital Management – Tangible Common Equity" section in this Report.
(2) The efficiency ratio is noninterest expense divided by total revenue (net interest income and noninterest income).
(3) Pre-tax pre-provision profit (PTPP) is total revenue less noninterest expense. Management believes that PTPP is a useful financial measure because it enables investors and others to assess the Company's ability to generate capital to cover credit losses through a credit cycle.
(4) Consumer and small business banking deposits are total deposits excluding mortgage escrow and wholesale deposits.
(5) The risk-based capital ratios were calculated under the lower of Standardized or Advanced Approach determined pursuant to Basel III. Beginning January 1, 2018, the requirements for calculating common equity tier 1 and tier 1 capital, along with risk-weighted assets, became fully phased-in; accordingly, the information presented reflects fully phased-in common equity tier 1 capital, tier 1 capital and risk-weighted assets but reflects total capital still in accordance with Transition Requirements. See the "Capital Management" section and Note 23 (Regulatory and Agency Capital Requirements) to Financial Statements in this Report for additional information.
(6) Book value per common share is common stockholders' equity divided by common shares outstanding. Tangible book value per common share is tangible common equity divided by common shares outstanding.

This Quarterly Report, including the Financial Review and the Financial Statements and related Notes, contains forward-looking statements, which may include forecasts of our financial results and condition, expectations for our operations and business, and our assumptions for those forecasts and expectations. Do not unduly rely on forward-looking statements. Actual results may differ materially from our forward-looking statements due to several factors. Factors that could cause our actual results to differ materially from our forward-looking statements are described in this Report, including in the "Forward-Looking Statements" section, and in the "Risk Factors" and "Regulation and Supervision" sections of our Annual Report on Form 10-K for the year ended December 31, 2018 (2018 Form 10-K).

When we refer to "Wells Fargo," "the Company," "we," "our," or "us" in this Report, we mean Wells Fargo & Company and Subsidiaries (consolidated). When we refer to the "Parent," we mean Wells Fargo & Company. See the Glossary of Acronyms for definitions of terms used throughout this Report.

Financial Review

Overview

Wells Fargo & Company is a diversified, community-based financial services company with $1.92 trillion in assets. Founded in 1852 and headquartered in San Francisco, we provide banking, investment and mortgage products and services, as well as consumer and commercial finance, through 7,600 locations, more than 13,000 ATMs, digital (online, mobile and social), and contact centers (phone, email and correspondence), and we have offices in 32 countries and territories to support customers who conduct business in the global economy. With approximately 263,000 active, full-time equivalent team members, we serve one in three households in the United States and ranked No. 29 on *Fortune's* 2019 rankings of America's largest corporations. We ranked fourth in assets and third in the market value of our common stock among all U.S. banks at June 30, 2019.

We use our *Vision, Values & Goals* to guide us toward growth and success. Our vision is to satisfy our customers' financial needs and help them succeed financially. We aspire to create deep and enduring relationships with our customers by providing them with an exceptional experience and by understanding their needs and delivering the most relevant products, services, advice, and guidance.

We have five primary values, which are based on our vision and guide the actions we take. First, we place customers at the center of everything we do. We want to exceed customer expectations and build relationships that last a lifetime. Second, we value and support our people as a competitive advantage and strive to attract, develop, motivate, and retain the best team members. Third, we strive for the highest ethical standards of integrity, transparency, and principled performance. Fourth, we value and promote diversity and inclusion in all aspects of business and at all levels. Fifth, we look to each of our team members to be a leader in establishing, sharing, and communicating our vision for our customers, communities, team members, and shareholders. In addition to our five primary values, one of our key day-to-day priorities is to make risk management a competitive advantage by working hard to ensure that appropriate controls are in place to reduce risks to our customers, maintain and increase our competitive market position, and protect Wells Fargo's long-term safety, soundness, and reputation.

In keeping with our primary values and risk management priorities, we have six long-term goals for the Company, which entail becoming the financial services leader in the following areas:

- Customer service and advice – provide exceptional service and guidance to our customers to help them succeed financially.
- Team member engagement – be a company where people feel included, valued, and supported; everyone is respected; and we work as a team.
- Innovation – create lasting value for our customers and increased efficiency for our operations through innovative thinking, industry-leading technology, and a willingness to test and learn.
- Risk management – set the global standard in managing all forms of risk.
- Corporate citizenship – make a positive contribution to communities through philanthropy, advancing diversity and inclusion, creating economic opportunity, and promoting environmental sustainability.
- Shareholder value – deliver long-term value for shareholders.

The Company's Board of Directors (Board) elected C. Allen Parker as Interim CEO and President and as a member of the Board effective March 28, 2019. The Board's external search for a permanent CEO is ongoing.

Federal Reserve Board Consent Order Regarding Governance Oversight and Compliance and Operational Risk Management

On February 2, 2018, the Company entered into a consent order with the Board of Governors of the Federal Reserve System (FRB). As required by the consent order, the Board submitted to the FRB a plan to further enhance the Board's governance and oversight of the Company, and the Company submitted to the FRB a plan to further improve the Company's compliance and operational risk management program. The Company continues to engage with the FRB as the Company works to address the consent order provisions. The consent order also requires the Company, following the FRB's acceptance and approval of the plans and the Company's adoption and implementation of the plans, to complete an initial third-party review of the enhancements and improvements provided for in the plans. Until this third-party review is complete and the plans are approved and implemented to the satisfaction of the FRB, the Company's total consolidated assets will be limited to the level as of December 31, 2017. Compliance with this asset cap will be measured on a two-quarter daily average basis to allow for management of temporary fluctuations. As of the end of second quarter 2019, our total consolidated assets, as calculated pursuant to the requirements of the consent order, were below our level of total assets as of December 31, 2017. Additionally, after removal of the asset cap, a second third-party review must also be conducted to assess the efficacy and sustainability of the enhancements and improvements.

Consent Orders with the Consumer Financial Protection Bureau and Office of the Comptroller of the Currency Regarding Compliance Risk Management Program, Automobile Collateral Protection Insurance Policies, and Mortgage Interest Rate Lock Extensions

On April 20, 2018, the Company entered into consent orders with the Consumer Financial Protection Bureau (CFPB) and the Office of the Comptroller of the Currency (OCC) to pay an aggregate of $1 billion in civil money penalties to resolve matters regarding the Company's compliance risk management program and past practices involving certain automobile collateral protection insurance policies and certain mortgage interest rate lock extensions. As required by the consent orders, the Company submitted to the CFPB and OCC an enterprise-wide compliance risk management plan and a plan to enhance the Company's internal audit program with respect to federal consumer financial law and the terms of the consent orders. In addition, as required by the consent orders, the Company submitted for non-objection plans to remediate customers affected by the automobile collateral protection insurance and mortgage interest rate lock matters, as well as a plan for the management of remediation activities conducted by the Company.

Retail Sales Practices Matters

As we have previously reported, in September 2016 we announced settlements with the CFPB, the OCC, and the Office of the Los Angeles City Attorney, and entered into consent orders with the CFPB and the OCC, in connection with allegations that some of our retail customers received products and services they did not request. As a result, it remains our top priority to rebuild trust through a comprehensive action plan that includes making things right for our customers, team members, and other stakeholders, and building a better Company for the future.

Our priority of rebuilding trust has included numerous actions focused on identifying potential financial harm and customer remediation. The Board and management are conducting company-wide reviews of sales practices issues. These reviews are ongoing. In August 2017, a third-party consulting firm completed an expanded data-driven review of retail banking accounts opened from January 2009 to September 2016 to identify financial harm stemming from potentially unauthorized accounts. We have completed financial remediation for the customers identified through the expanded account analysis. Additionally, customer outreach under the $142 million class-action lawsuit settlement concerning improper retail sales practices (*Jabbari v. Wells Fargo Bank, N.A.*) into which the Company entered to provide further remediation to customers, concluded in June 2018 and the period for customers to submit claims closed on July 7, 2018. The settlement administrator will pay claims following the calculation of compensatory damages and favorable resolution of pending appeals in the case.

For additional information regarding sales practices matters, including related legal matters, see the "Risk Factors" section in our 2018 Form 10-K and Note 14 (Legal Actions) to Financial Statements in this Report.

Additional Efforts to Rebuild Trust

Our priority of rebuilding trust has also included an effort to identify other areas or instances where customers may have experienced financial harm. We are working with our regulatory agencies in this effort, and we have accrued for the reasonably estimable remediation costs related to these matters, which amounts may change based on additional facts and information, as well as ongoing reviews and communications with our regulators. As part of this effort, we are focused on the following key areas:

- **Automobile Lending Business** The Company is reviewing practices concerning the origination, servicing, and collection of consumer automobile loans, including matters related to certain insurance products. In July 2017, the Company announced it would remediate customers who may have been financially harmed due to issues related to automobile collateral protection insurance (CPI) policies purchased through a third-party vendor on their behalf (based on an understanding that the borrowers did not have physical damage insurance coverage on their automobiles as required during the term of their automobile loans). The Company is in the process of providing remediation to affected customers and/or letters to affected customers through which they may claim or otherwise receive remediation compensation for policies placed between October 15, 2005, and September 30, 2016. In addition, the Company has identified certain issues related to the unused portion of guaranteed automobile protection waiver or insurance agreements between the customer and dealer and, by assignment, the lender, which will require remediation to customers in certain states. The Company is in the process of providing such remediation to affected customers. The Company has also identified certain issues related to its consumer automobile collections processes for customers in default, including legal notice practices in certain states and expenses charged in connection with certain repossessions. We expect remediation of affected customers will be required.
- **Add-on Products** The Company is reviewing practices related to certain consumer "add-on" products, including identity theft and debt protection products that were subject to an OCC consent order entered into in June 2015, as well as home and automobile warranty products, and memberships in discount programs. The products were sold to customers through a number of distribution channels and, in some cases, were acquired by the Company in connection with the purchase of loans. Sales of certain of these products have been discontinued over the past few years primarily due to decisions made by the Company in the normal course of business, and by mid-2017, the Company had ceased selling any of these products to consumers. We are in the process of providing remediation where we identify affected customers, and are also providing refunds to customers who purchased certain products. The review of the Company's historical practices with respect to these products is ongoing, focusing on, among other topics, sales practices, adequacy of disclosures, customer servicing, and volume and type of customer complaints.
- **Consumer Deposit Account Freezing/Closing** The Company is reviewing certain historical practices associated with the freezing (and, in many cases, closing) of consumer deposit accounts after the Company detected suspected fraudulent activity (by third-parties or account holders) that affected those accounts. Based on our ongoing review, we expect to remediate affected customers.
- **Review of Certain Activities Within Wealth and Investment Management** A review of certain activities within Wealth and Investment Management (WIM) being conducted by the Board, in response to inquiries from federal government agencies, is assessing whether there have

been inappropriate referrals or recommendations, including with respect to rollovers for 401(k) plan participants, certain alternative investments, or referrals of brokerage customers to the Company's investment and fiduciary services business. The Board substantially completed its review and did not uncover evidence of systemic or widespread issues in these businesses. Federal government agencies continue to review this matter.

- **Fiduciary and Custody Account Fee Calculations** The Company is reviewing fee calculations within certain fiduciary and custody accounts in its investment and fiduciary services business, which is part of the wealth management business in WIM. The Company has determined that there have been instances of incorrect fees being applied to certain assets and accounts, resulting in both overcharges and undercharges to customers. These issues included the incorrect set-up and maintenance in the system of record of the values associated with certain assets. The Company has performed root cause analyses with the assistance of third parties and is in the process of implementing additional operational and control procedures as a result. Systems, operations, and account-level reviews are ongoing to determine the extent of any assets and accounts affected, and, as a result of its reviews to date, the Company has suspended the charging of fees on some assets and accounts, has notified the affected customers, and is continuing its analysis of those assets and accounts. We are in the process of providing remediation to affected customers and continue to review customer accounts to determine the extent of any necessary remediation, including with respect to additional accounts not yet reviewed, which may lead to additional accruals and fee suspensions.
- **Foreign Exchange Business** The Company has completed an assessment, with the assistance of a third party, of its policies, practices, and procedures in its foreign exchange (FX) business. The FX business has substantially completed the implementation of new policies, practices, and procedures, including those related to pricing. The Company is in the process of providing remediation to customers that may have received pricing inconsistent with commitments made to those customers, and rebates to customers where historic pricing, while consistent with contracts entered into with those customers, does not conform to recently implemented pricing review standards for prior periods. The Company's review of affected customers is ongoing.
- **Mortgage Loan Modifications** An internal review of the Company's use of a mortgage loan modification underwriting tool identified a calculation error regarding foreclosure attorneys' fees affecting certain accounts that were in the foreclosure process between April 13, 2010, and October 2, 2015, when the error was corrected. A subsequent expanded review identified related errors regarding the maximum allowable foreclosure attorneys' fees permitted for certain accounts that were in the foreclosure process between March 15, 2010, and April 30, 2018, when new controls were implemented. Similar to the initial calculation error, these errors caused an overstatement of the attorneys' fees that were included for purposes of determining whether a customer qualified for a mortgage loan modification or repayment plan pursuant to the requirements of government-sponsored enterprises (such as Fannie Mae and Freddie Mac), the Federal Housing Administration (FHA), and the U.S. Department of Treasury's Home Affordable Modification Program. Customers were not actually charged the incorrect attorneys' fees. As previously disclosed, the Company has identified customers who, as a result of these errors, were incorrectly denied a loan modification or were not offered a loan modification or repayment plan in cases where they otherwise would have qualified, as well as instances where a foreclosure was completed after the loan modification was denied or the customer was deemed ineligible to be offered a loan modification or repayment plan. The number of previously disclosed customers affected by these errors may change as a result of ongoing validation, but is not expected to change materially upon completion of this validation. The Company has contacted substantially all of the identified customers affected by these errors and has provided remediation as well as the option to pursue no-cost mediation with an independent mediator. The Company's review of its mortgage loan modification practices is ongoing, and we are providing remediation to the extent we identify additional affected customers as a result of this review.
- **Consumer Deposit Account Disclosures and Fees** The Company is reviewing certain past disclosures to customers regarding the minimum qualifying debit card usage required for customers to receive a waiver of monthly service fees on certain consumer deposit accounts. Based on the possibility of confusion by some customers regarding the transactions that counted toward the waiver, we expect to refund certain monthly service and related fees to affected customers.

  Separately, the Company expects to refund certain monthly service fees that were charged in the past on certain consumer deposit accounts prior to an initial deposit being made by the customer. Under the Company's current processes, which have been in place for several years, we would no longer assess a monthly service fee on such accounts prior to an initial deposit by the customer.

To the extent issues are identified, we will continue to assess any customer harm and provide remediation as appropriate. This effort to identify other instances in which customers may have experienced harm is ongoing, and it is possible that we may identify other areas of potential concern. For more information, including related legal and regulatory risk, see the "Risk Factors" section in our 2018 Form 10-K and Note 14 (Legal Actions) to Financial Statements in this Report.

Financial Performance

Wells Fargo net income was $6.2 billion in second quarter 2019 with diluted earnings per common share (EPS) of $1.30, compared with $5.2 billion and $0.98, respectively, a year ago. In second quarter 2019:

- revenue was $21.6 billion, up $31 million compared with a year ago, with net interest income down $446 million and noninterest income up $477 million;
- the net interest margin was 2.82%, down 11 basis points from a year ago primarily due to balance sheet mix and repricing;
- noninterest expense was $13.4 billion, down $533 million from a year ago primarily due to lower remediation expense, core deposit and other intangibles expense, and FDIC and other deposit assessments expense;
- average loans were $947.5 billion, up $3.4 billion from a year ago;
- average deposits were $1.3 trillion, down $2.4 billion from a year ago;

- return on assets (ROA) of 1.31% and return on equity (ROE) of 13.26%, were up from 1.10% and 10.60%, respectively, a year ago;
- our credit results remained strong with a net charge-off rate of 0.28% (annualized) of average loans in second quarter 2019, compared with 0.26% (annualized) a year ago;
- nonaccrual loans of $5.9 billion were down $1.2 billion, or 17%, from a year ago; and
- we returned $6.1 billion to shareholders through common stock dividends and net share repurchases, an increase of 52% from the $4.0 billion we returned in second quarter 2018 and the 16th consecutive quarter of returning more than $3 billion.

Balance Sheet and Liquidity

Our balance sheet remained strong during second quarter 2019 with strong credit quality and solid levels of liquidity and capital. Our total assets were $1.92 trillion at June 30, 2019. Cash and other short-term investments increased $23.1 billion from December 31, 2018, reflecting an increase in federal funds sold and securities purchased under resale agreements. Debt securities were $482.1 billion at June 30, 2019, a decrease of $2.6 billion from December 31, 2018, predominantly due to a decrease in available-for-sale debt securities. Loans were down $3.2 billion from December 31, 2018, driven by declines in real estate 1-4 family junior lien mortgage, commercial and industrial, commercial real estate construction, and other revolving credit and installment loans, partially offset by increases in real estate 1-4 family first mortgage and commercial real estate mortgage loans.

Average deposits in second quarter 2019 were $1.3 trillion, down $2.4 billion from second quarter 2018 reflecting lower Wealth and Investment Management and Wholesale Banking deposits as customers allocated more cash into higher yielding liquid alternatives. Our average deposit cost in second quarter 2019 was 70 basis points, up 30 basis points from a year ago, driven by an increase in Wholesale Banking and Wealth and Investment Management deposit rates, unfavorable deposit mix shifts and retail banking deposit campaign pricing for new deposits.

Credit Quality

Solid overall credit results continued in second quarter 2019 as losses remained low and we continued to originate high quality loans, reflecting our long-term risk focus. Net charge-offs were $653 million, or 0.28% (annualized) of average loans, in second quarter 2019, compared with $602 million a year ago (0.26%) (annualized). The increase in net charge-offs in second quarter 2019, compared with a year ago, was predominantly driven by higher losses in the commercial and industrial portfolio and the credit card portfolio, partially offset by declines in the automobile portfolio.

Our commercial portfolio net charge-offs were $165 million, or 13 basis points (annualized) of average commercial loans, in second quarter 2019, compared with net charge-offs of $67 million, or 5 basis points (annualized), a year ago. Net consumer credit losses decreased to 45 basis points (annualized) of average consumer loans in second quarter 2019 from 49 basis points (annualized) in second quarter 2018.

The allowance for credit losses as of June 30, 2019, decreased $507 million compared with a year ago and decreased $104 million from December 31, 2018. We had a $150 million release in the allowance for credit losses in both second quarter 2019 and 2018. The allowance coverage for total loans was 1.12% at June 30, 2019, compared with 1.18% a year ago and 1.12% at December 31, 2018. The allowance covered 4.0 times annualized second quarter net charge-offs, compared with 4.6 times a year ago. Future allowance levels will be based on a variety of factors, including loan growth, portfolio performance and general economic conditions. Our provision for loan losses was $503 million in second quarter 2019, up from $452 million a year ago.

Nonperforming assets decreased $1.0 billion, or 14%, from March 31, 2019, and $648 million, or 9%, from December 31, 2018, and represented 0.66% of total loans at June 30, 2019. Nonaccrual loans decreased $983 million from March 31, 2019, and $574 million from December 31, 2018, driven by a decline in consumer nonaccruals from the reclassification of $373 million in real estate 1-4 family first mortgage nonaccrual loans to mortgage loans held for sale (MLHFS) in second quarter 2019, as well as other broad-based improvement across several commercial industry categories. Foreclosed assets decreased $59 million from March 31, 2019, and $74 million from December 31, 2018.

Capital

Our financial performance in second quarter 2019 allowed us to maintain a solid capital position, with total equity of $200.0 billion at June 30, 2019, compared with $197.1 billion at December 31, 2018. We returned $6.1 billion to shareholders in second quarter 2019 through common stock dividends and net share repurchases, which was 52% more than the $4.0 billion we returned in second quarter 2018. Our net payout ratio (which is the ratio of (i) common stock dividends and share repurchases less issuances and stock compensation-related items, divided by (ii) net income applicable to common stock) was 104%. We continued to reduce our common shares outstanding through the repurchase of 104.9 million common shares in the quarter. We expect to reduce our common shares outstanding through share repurchases throughout the remainder of 2019.

We believe an important measure of our capital strength is the Common Equity Tier 1 (CET1) ratio under Basel III, fully phased-in, which was 11.97% at June 30, 2019, up from 11.74% at December 31, 2018, and well above our internal target of 10%. As of June 30, 2019, our eligible external total loss absorbing capacity (TLAC) as a percentage of total risk-weighted assets was 24.09%, compared with the required minimum of 22.0%. Likewise, our other regulatory capital ratios remained strong. See the “Capital Management” section in this Report for more information regarding our capital, including the calculation of our regulatory capital amounts.

Earnings Performance

Wells Fargo net income for second quarter 2019 was $6.2 billion ($1.30 diluted earnings per common share), compared with $5.2 billion ($0.98 diluted per share) for second quarter 2018. Our financial performance in second quarter 2019 benefited from a $477 million increase in noninterest income, a $533 million decrease in noninterest expense, and a $516 million decline in income tax expense, partially offset by a $446 million decrease in net interest income, and a $51 million increase in our provision for credit losses. Net income in second quarter 2019 benefited from a net discrete income tax benefit of $14 million, compared with a net discrete income tax expense of $481 million for the same period a year ago. Net income for the first half of 2019 was $12.1 billion, compared with $10.3 billion for the same period a year ago. The increase in net income in the first half of 2019, compared with the same period a year ago, was driven by a $79 million increase in noninterest income, a $1.7 billion decrease in noninterest expense, and a $1.0 billion decline in income tax expense, partially offset by a $373 million decrease in net interest income, and a $705 million increase in our provision for credit losses. Net income in the first half of 2019 benefited from a net discrete income tax benefit of $311 million, compared with a net discrete income tax expense of $618 million for the same period a year ago.

Revenue, the sum of net interest income and noninterest income, was $21.6 billion in both the second quarter of 2019 and 2018. Revenue was flat in second quarter 2019, compared with the same period a year ago, with an increase in noninterest income, offset by a decrease in net interest income. Our diversified sources of revenue generated by our businesses continued to be balanced between net interest income and noninterest income. Revenue for the first half of 2019 was $43.2 billion, compared with $43.5 billion for the first half of 2018. The decline in revenue in the first half of 2019, compared with the same period a year ago, was predominantly due to a decline in net interest income. In the first half of 2019 and 2018, net interest income represented 57% of revenue. Noninterest income was $18.8 billion in the first half of 2019, representing 43% of revenue, compared with $18.7 billion and 43% in the first half of 2018.

Net Interest Income

Net interest income is the interest earned on debt securities, loans (including yield-related loan fees) and other interest-earning assets minus the interest paid on deposits, short-term borrowings and long-term debt. The net interest margin is the average yield on earning assets minus the average interest rate paid for deposits and our other sources of funding. Net interest income and the net interest margin are presented on a taxable-equivalent basis in Table 1 to consistently reflect income from taxable and tax-exempt loans and debt and equity securities based on a 21% federal statutory tax rate for the periods ending June 30, 2019 and 2018.

Net interest income and the net interest margin in any one period can be significantly affected by a variety of factors including the mix and overall size of our earning assets portfolio and the cost of funding those assets. In addition, variable sources of interest income, such as loan fees, periodic dividends, and collection of interest on nonaccrual loans, can fluctuate from period to period.

Net interest income on a taxable-equivalent basis was $12.3 billion and $24.7 billion in the second quarter and first half of 2019, respectively, compared with $12.7 billion and $25.1 billion for the same periods a year ago. Net interest margin on a taxable-equivalent basis was 2.82% and 2.86% in the second quarter and first half of 2019, compared with 2.93% and 2.89% for the same periods a year ago. The decrease in net interest income and net interest margin in the second quarter and first half of 2019, compared with the same periods a year ago, was driven by:

- unfavorable impacts of growth, mix and repricing; and
- lower variable sources of interest income;

partially offset by:

- favorable hedge ineffectiveness accounting results; and
- a reduction in net securities premium amortization.

Average earning assets increased $6.7 billion in the second quarter compared with the same period a year ago. The change was driven by increases in:

- average federal funds sold and securities purchased under resale agreements of $18.1 billion;
- average debt securities of $4.2 billion; and
- average loans of $3.4 billion;

partially offset by decreases in:

- average interest-earning deposits of $13.8 billion;
- average equity securities of $2.1 billion;
- average loans held for sale of $1.8 billion;
- other earning assets of $825 million; and
- average mortgage loans held for sale of $324 million.

Average earning assets decreased $11.5 billion in the first half of 2019 compared with the same period a year ago. The change was driven by decreases in:

- average interest-earning deposits of $22.6 billion;
- average equity securities of $4.4 billion;
- average mortgage loans held for sale of $2.4 billion;
- average loans held for sale of $1.0 billion; and
- other earning assets of $1.2 billion;

partially offset by increases in:

- average federal funds sold and securities purchased under resale agreements of $11.8 billion;
- average debt securities of $7.1 billion; and
- average loans of $1.2 billion.

Deposits are an important low-cost source of funding and affect both net interest income and the net interest margin. Deposits include noninterest-bearing deposits, interest-bearing checking, market rate and other savings, savings certificates, other time deposits, and deposits in foreign offices. Average deposits were $1.27 trillion in both the second quarter and first half of 2019, respectively, compared with $1.27 trillion and $1.28 trillion in the same periods a year ago, and represented 134% of average loans in second quarter 2019 and 133% in the first half of 2019, compared with 135% in second quarter 2018 and 136% in the first half of 2018. Average deposits were 73% of average earning assets in both the second quarter and first half of 2019, compared with 73% in both the periods a year ago. The average deposit cost for second quarter 2019 was 70 basis points, up 30 basis points from a year ago, driven by an increase in Wholesale Banking and WIM deposit rates, unfavorable deposit mix shifts, and retail banking deposit campaign pricing for new deposits.

Table 1: Average Balances, Yields and Rates Paid (Taxable-Equivalent Basis) (1)(2)

						Quarter ended June 30,
			2019			2018
(in millions)	Average balance	Yields/ rates	Interest income/ expense	Average balance	Yields/ rates	Interest income/ expense
Earning assets						
Interest-earning deposits with banks	$ 141,045	2.33%	$ 819	154,846	1.75%	$ 676
Federal funds sold and securities purchased under resale agreements	98,130	2.44	598	80,020	1.73	344
Debt securities (3):						
Trading debt securities	86,514	3.45	746	80,661	3.45	695
Available-for-sale debt securities:						
Securities of U.S. Treasury and federal agencies	15,402	2.21	85	6,425	1.66	27
Securities of U.S. states and political subdivisions	45,769	4.02	460	47,388	3.91	464
Mortgage-backed securities:						
Federal agencies	149,761	2.99	1,120	154,929	2.75	1,065
Residential and commercial	5,562	4.02	56	8,248	4.86	101
Total mortgage-backed securities	155,323	3.03	1,176	163,177	2.86	1,166
Other debt securities	45,063	4.40	494	47,009	4.33	506
Total available-for-sale debt securities	261,557	3.39	2,215	263,999	3.28	2,163
Held-to-maturity debt securities:						
Securities of U.S. Treasury and federal agencies	44,762	2.19	244	44,731	2.19	244
Securities of U.S. states and political subdivisions	6,958	4.06	71	6,255	4.34	68
Federal agency and other mortgage-backed securities	95,506	2.64	632	94,964	2.33	552
Other debt securities	58	3.86	—	584	4.66	7
Total held-to-maturity debt securities	147,284	2.57	947	146,534	2.38	871
Total debt securities	495,355	3.16	3,908	491,194	3.04	3,729
Mortgage loans held for sale (4)	18,464	4.22	195	18,788	4.22	198
Loans held for sale (4)	1,642	4.80	20	3,481	5.48	48
Loans:						
Commercial loans:						
Commercial and industrial – U.S.	285,084	4.47	3,176	275,259	4.16	2,851
Commercial and industrial – Non U.S.	62,905	3.90	611	59,716	3.51	524
Real estate mortgage	121,869	4.58	1,390	123,982	4.27	1,319
Real estate construction	21,568	5.36	288	23,637	4.88	287
Lease financing	19,133	4.71	226	19,266	4.48	216
Total commercial loans	510,559	4.47	5,691	501,860	4.15	5,197
Consumer loans:						
Real estate 1-4 family first mortgage	286,169	3.88	2,776	283,101	4.06	2,870
Real estate 1-4 family junior lien mortgage	32,609	5.75	468	37,249	5.32	495
Credit card	38,154	12.65	1,204	35,883	12.66	1,133
Automobile	45,179	5.23	589	48,568	5.18	628
Other revolving credit and installment	34,790	7.12	617	37,418	6.62	617
Total consumer loans	436,901	5.18	5,654	442,219	5.20	5,743
Total loans (4)	947,460	4.80	11,345	944,079	4.64	10,940
Equity securities	35,215	2.70	237	37,330	2.38	222
Other	4,693	1.76	20	5,518	1.48	21
Total earning assets	$ 1,742,004	3.94%	$ 17,142	1,735,256	3.73%	$ 16,178
Funding sources						
Deposits:						
Interest-bearing checking	$ 57,549	1.46%	$ 210	80,324	0.90%	$ 181
Market rate and other savings	690,677	0.59	1,009	676,668	0.26	434
Savings certificates	30,620	1.62	124	20,033	0.43	21
Other time deposits	96,887	2.61	630	82,061	2.26	465
Deposits in foreign offices	51,875	1.86	240	51,474	1.30	167
Total interest-bearing deposits	927,608	0.96	2,213	910,560	0.56	1,268
Short-term borrowings	114,754	2.26	646	103,795	1.54	398
Long-term debt	236,734	3.21	1,900	223,800	2.97	1,658
Other liabilities	24,314	2.18	132	28,202	2.12	150
Total interest-bearing liabilities	1,303,410	1.50	4,891	1,266,357	1.10	3,474
Portion of noninterest-bearing funding sources	438,594	—	—	468,899	—	—
Total funding sources	$ 1,742,004	1.12	4,891	1,735,256	0.80	3,474
Net interest margin and net interest income on a taxable-equivalent basis (5)		2.82%	$ 12,251		2.93%	$ 12,704
Noninterest-earning assets						
Cash and due from banks	$ 19,475			18,609		
Goodwill	26,415			26,444		
Other	112,733			104,575		
Total noninterest-earning assets	$ 158,623			149,628		
Noninterest-bearing funding sources						
Deposits	$ 341,371			360,779		
Other liabilities	56,161			51,681		
Total equity	199,685			206,067		
Noninterest-bearing funding sources used to fund earning assets	(438,594)			(468,899)		
Net noninterest-bearing funding sources	$ 158,623			149,628		
Total assets	$ 1,900,627			1,884,884		

(1) Our average prime rate was 5.50% and 4.80% for the quarters ended June 30, 2019 and 2018, respectively, and 5.50% and 4.66%, for the first half of 2019 and 2018, respectively. The average three-month London Interbank Offered Rate (LIBOR) was 2.51% and 2.34% for the quarters ended June 30, 2019 and 2018, respectively, and 2.60% and 2.13% for the first half of 2019 and 2018, respectively.
(2) Yields/rates and amounts include the effects of hedge and risk management activities associated with the respective asset and liability categories.
(3) Yields/rates are based on interest income/expense amounts for the period, annualized based on the accrual basis for the respective accounts. The average balance amounts represent amortized cost for the periods presented.

	Six months ended June 30,					
	2019			2018		
(in millions)	**Average balance**	**Yields/ rates**	**Interest income/ expense**	Average balance	Yields/ rates	Interest income/ expense
Earning assets						
Interest-earning deposits with banks	**$ 140,915**	**2.33%**	**$ 1,629**	163,520	1.61%	$ 1,308
Federal funds sold and securities purchased under resale agreements	**90,875**	**2.42**	**1,093**	79,083	1.57	615
Debt securities (3):						
Trading debt securities	**87,938**	**3.52**	**1,544**	79,693	3.35	1,332
Available-for-sale debt securities:						
Securities of U.S. Treasury and federal agencies	**14,740**	**2.18**	**159**	6,426	1.66	53
Securities of U.S. states and political subdivisions	**47,049**	**4.02**	**946**	48,665	3.64	885
Mortgage-backed securities:						
Federal agencies	**150,623**	**3.04**	**2,293**	156,690	2.73	2,141
Residential and commercial	**5,772**	**4.17**	**120**	8,558	4.48	192
Total mortgage-backed securities	**156,395**	**3.09**	**2,413**	165,248	2.82	2,333
Other debt securities	**45,920**	**4.43**	**1,011**	47,549	4.02	950
Total available-for-sale debt securities	**264,104**	**3.44**	**4,529**	267,888	3.16	4,221
Held-to-maturity debt securities:						
Securities of U.S. Treasury and federal agencies	**44,758**	**2.20**	**487**	44,727	2.20	487
Securities of U.S. states and political subdivisions	**6,560**	**4.05**	**133**	6,257	4.34	136
Federal agency and other mortgage-backed securities	**95,753**	**2.69**	**1,288**	92,888	2.35	1,093
Other debt securities	**60**	**3.91**	**1**	639	3.89	12
Total held-to-maturity debt securities	**147,131**	**2.60**	**1,909**	144,511	2.40	1,728
Total debt securities	**499,173**	**3.20**	**7,982**	492,092	2.96	7,281
Mortgage loans held for sale (4)	**16,193**	**4.28**	**347**	18,598	4.06	377
Loans held for sale (4)	**1,752**	**5.04**	**44**	2,750	5.28	72
Loans:						
Commercial loans:						
Commercial and industrial – U.S.	**285,827**	**4.47**	**6,345**	273,658	4.00	5,435
Commercial and industrial – Non U.S.	**62,863**	**3.90**	**1,215**	59,964	3.37	1,003
Real estate mortgage	**121,644**	**4.58**	**2,763**	125,085	4.16	2,581
Real estate construction	**21,999**	**5.40**	**589**	24,041	4.70	561
Lease financing	**19,261**	**4.66**	**450**	19,266	4.89	471
Total commercial loans	**511,594**	**4.48**	**11,362**	502,014	4.03	10,051
Consumer loans:						
Real estate 1-4 family first mortgage	**285,694**	**3.92**	**5,597**	283,651	4.04	5,722
Real estate 1-4 family junior lien mortgage	**33,197**	**5.75**	**949**	38,042	5.23	988
Credit card	**38,168**	**12.76**	**2,416**	36,174	12.71	2,280
Automobile	**45,007**	**5.21**	**1,163**	50,010	5.17	1,283
Other revolving credit and installment	**35,068**	**7.13**	**1,240**	37,641	6.54	1,221
Total consumer loans	**437,134**	**5.22**	**11,365**	445,518	5.18	11,494
Total loans (4)	**948,728**	**4.82**	**22,727**	947,532	4.57	21,545
Equity securities	**34,154**	**2.63**	**448**	38,536	2.37	455
Other	**4,555**	**1.69**	**38**	5,765	1.34	40
Total earning assets	**$ 1,736,345**	**3.97%**	**$ 34,308**	1,747,876	3.64%	$ 31,693
Funding sources						
Deposits:						
Interest-bearing checking	**$ 56,905**	**1.44%**	**$ 407**	74,084	0.84%	$ 310
Market rate and other savings	**689,628**	**0.54**	**1,856**	677,861	0.24	802
Savings certificates	**27,940**	**1.46**	**202**	20,025	0.38	38
Other time deposits	**97,356**	**2.64**	**1,275**	79,340	2.06	812
Deposits in foreign offices	**53,649**	**1.88**	**499**	73,023	1.09	396
Total interest-bearing deposits	**925,478**	**0.92**	**4,239**	924,333	0.51	2,358
Short-term borrowings	**111,719**	**2.24**	**1,243**	102,793	1.39	710
Long-term debt	**234,963**	**3.27**	**3,827**	224,924	2.88	3,234
Other liabilities	**24,801**	**2.23**	**275**	28,065	2.02	282
Total interest-bearing liabilities	**1,296,961**	**1.49**	**9,584**	1,280,115	1.03	6,584
Portion of noninterest-bearing funding sources	**439,384**		**—**	467,761	—	—
Total funding sources	**$ 1,736,345**	**1.11**	**9,584**	1,747,876	0.75	6,584
Net interest margin and net interest income on a taxable-equivalent basis (5)		**2.86%**	**$ 24,724**		2.89%	$ 25,109
Noninterest-earning assets						
Cash and due from banks	**$ 19,544**			18,730		
Goodwill	**26,417**			26,480		
Other	**109,601**			107,218		
Total noninterest-earning assets	**$ 155,562**			152,428		
Noninterest-bearing funding sources						
Deposits	**$ 340,061**			359,854		
Other liabilities	**55,864**			54,212		
Total equity	**199,021**			206,123		
Noninterest-bearing funding sources used to fund earning assets	**(439,384)**			(467,761)		
Net noninterest-bearing funding sources	**$ 155,562**			152,428		
Total assets	**$ 1,891,907**			1,900,304		

(4) Nonaccrual loans and related income are included in their respective loan categories.

(5) Includes taxable-equivalent adjustments of $156 million and $163 million for the quarters ended June 30, 2019 and 2018, respectively, and $318 million and $330 million for the first half of 2019 and 2018, respectively, predominantly related to tax-exempt income on certain loans and securities. The federal statutory tax rate utilized was 21% for the periods presented.

Noninterest Income

Table 2: Noninterest Income

	Quarter ended June 30,		%	Six months ended June 30,		%
(in millions)	**2019**	2018	Change	**2019**	2018	Change
Service charges on deposit accounts	$ **1,206**	1,163	4%	$ **2,300**	2,336	(2)%
Trust and investment fees:						
Brokerage advisory, commissions and other fees	**2,318**	2,354	(2)	**4,511**	4,757	(5)
Trust and investment management	**795**	835	(5)	**1,581**	1,685	(6)
Investment banking	**455**	486	(6)	**849**	916	(7)
Total trust and investment fees	**3,568**	3,675	(3)	**6,941**	7,358	(6)
Card fees	**1,025**	1,001	2	**1,969**	1,909	3
Other fees:						
Lending related charges and fees (1)	**349**	376	(7)	**696**	756	(8)
Cash network fees	**117**	120	(3)	**226**	246	(8)
Commercial real estate brokerage commissions	**105**	109	(4)	**186**	194	(4)
Wire transfer and other remittance fees	**121**	121	—	**234**	237	(1)
All other fees	**108**	120	(10)	**228**	213	7
Total other fees	**800**	846	(5)	**1,570**	1,646	(5)
Mortgage banking:						
Servicing income, net	**277**	406	(32)	**641**	874	(27)
Net gains on mortgage loan origination/sales activities	**481**	364	32	**825**	830	(1)
Total mortgage banking	**758**	770	(2)	**1,466**	1,704	(14)
Insurance	**93**	102	(9)	**189**	216	(13)
Net gains from trading activities	**229**	191	20	**586**	434	35
Net gains on debt securities	**20**	41	(51)	**145**	42	245
Net gains from equity securities	**622**	295	111	**1,436**	1,078	33
Lease income	**424**	443	(4)	**867**	898	(3)
Life insurance investment income	**167**	162	3	**326**	326	—
All other	**577**	323	79	**992**	761	30
Total	$ **9,489**	9,012	5	$ **18,787**	18,708	—

(1) Represents combined amount of previously reported "Charges and fees on loans" and "Letters of credit fees".

Noninterest income was $9.5 billion and $18.8 billion in the second quarter and first half of 2019, respectively, compared with $9.0 billion and $18.7 billion for the same periods a year ago. This income represented 44% of revenue for second quarter 2019 and 43% of revenue for the first half of 2019, compared with 42% and 43% for the same periods a year ago. The increase in noninterest income in the second quarter and first half of 2019, compared with the same periods a year ago, was predominantly driven by higher net gains from equity securities and higher all other income. The increase in the first half of 2019, compared with the same period a year ago, also reflected higher net gains from trading and debt securities. The increases in both periods were partially offset by lower trust and investment fees and lower mortgage banking income. For more information on our performance obligations and the nature of services performed for certain of our revenues discussed below, see Note 18 (Revenue from Contracts with Customers) to Financial Statements in this Report.

Service charges on deposit accounts were $1.2 billion and $2.3 billion in the second quarter and first half of 2019, respectively, flat compared with the same periods a year ago. In second quarter 2019, compared with the same period a year ago, higher consumer service charges due to growth in overdraft and returned items fees were offset by lower treasury management fees. In the first half of 2019, compared with the same period a year ago, lower treasury management fees and lower consumer monthly service fees were offset by higher overdraft and returned items fees. The decline in treasury management fees in both the second quarter and first half of 2019, compared with the same periods a year ago, was primarily due to the impact of a higher earnings credit rate applied to commercial accounts due to increased interest rates.

Brokerage advisory, commissions and other fees decreased to $2.3 billion and $4.5 billion in the second quarter and first half of 2019, respectively, compared with $2.4 billion and $4.8 billion for the same periods a year ago. The decreases in both periods, compared with the same periods a year ago, were due to lower asset-based fees and lower transactional commission revenue. Retail brokerage client assets totaled $1.6 trillion at both June 30, 2019 and 2018, with all retail brokerage services provided by our Wealth and Investment Management (WIM) operating segment. For additional information on retail brokerage client assets, see the discussion and Tables 4d and 4e in the "Operating Segment Results – Wealth and Investment Management – Retail Brokerage Client Assets" section in this Report.

Trust and investment management fee income is largely from client assets under management (AUM) for which fees are based on a tiered scale relative to market value of the assets, and client assets under administration (AUA), for which fees are generally based on the extent of services to administer the assets. Trust and investment management fees declined to $795 million and $1.6 billion in the second quarter and first half of 2019, respectively, from $835 million and $1.7 billion for the same periods a year ago. The decreases in both periods, compared with the same periods a year ago, were due to lower trust fees, investment management fees, and mutual fund asset fees, driven by lower average assets under management.

Our AUM totaled $682.0 billion at June 30, 2019, compared with $677.7 billion at June 30, 2018, with substantially all of our AUM managed by our WIM operating segment. Additional information regarding our WIM operating segment AUM is provided in Table 4f and the related discussion in the "Operating Segment Results – Wealth and Investment Management – Trust and Investment Client Assets Under Management" section in this Report.

Our AUA, which includes assets administered by our Institutional Retirement and Trust business (IRT), totaled $1.8 trillion at June 30, 2019, compared with $1.7 trillion at June 30, 2018. We closed the previously announced sale of IRT on July 1, 2019, and recognized a pre-tax gain of approximately $1.1 billion, which will be reflected in our third quarter 2019 net income. We will continue to administer client assets at the direction of the buyer for up to 24 months pursuant to a transition services agreement. The buyer will receive all post-closing revenue from the client assets and will pay us a fee for costs that we incur to administer the client assets during the transition period. The transition services fee will be recognized as other noninterest income. AUA related to IRT were $918 billion at June 30, 2019. Noninterest income related to IRT was $188 million and $398 million for the first half of 2019 and full year 2018, respectively. Direct expenses related to IRT were $130 million and $256 million for the first half of 2019 and full year 2018, respectively. Transition period revenue is expected to approximate transition period expenses and is subject to downward adjustment as client assets transition to the buyer's platform.

Investment banking fees decreased to $455 million and $849 million in the second quarter and first half of 2019, respectively, from $486 million and $916 million for the same periods in 2018, primarily due to lower equity and debt originations. The decrease in the first half of 2019, compared with the same period a year ago, was partially offset by higher advisory fees.

Card fees were $1.0 billion and $2.0 billion in the second quarter and first half of 2019, respectively, compared with $1.0 billion and $1.9 billion for the same periods a year ago. The increase in the first half of 2019, compared with the same period a year ago, was predominantly due to higher interchange fees driven by increased purchase activity, partially offset by higher rewards costs.

Other fees decreased to $800 million and $1.57 billion in the second quarter and first half of 2019, respectively, from $846 million and $1.65 billion for the same periods a year ago, driven primarily by lower lending related charges and fees. The first half of 2019, compared with the same period a year ago, was also impacted by lower cash network fees.

Mortgage banking noninterest income, consisting of net servicing income and net gains on mortgage loan origination/sales activities, totaled $758 million and $1.5 billion in the second quarter and first half of 2019, respectively, compared with $770 million and $1.7 billion for the same periods a year ago.

In addition to servicing fees, net mortgage loan servicing income includes amortization of commercial mortgage servicing rights (MSRs), changes in the fair value of residential MSRs during the period, as well as changes in the value of derivatives (economic hedges) used to hedge the residential MSRs. Net servicing income of $277 million for second quarter 2019 included a $77 million net MSR valuation gain ($1.1 billion decrease in the fair value of the MSRs and a $1.2 billion hedge gain). Net servicing income of $406 million for second quarter 2018 included a $26 million net MSR valuation gain ($345 million increase in the fair value of the MSRs and a $319 million hedge loss). For the first half of 2019, net servicing income of $641 million included a $148 million net MSR valuation gain ($2.0 billion decrease in the fair value of the MSRs and a $2.1 billion hedge gain), and for the first half of 2018, net servicing income of $874 million included a $136 million net MSR valuation gain ($1.7 billion increase in the fair value of the MSRs and a $1.5 billion hedge loss). The reduction in net servicing income for the second quarter and first half of 2019, compared with the same periods a year ago, also reflected lower net servicing fees due to servicing portfolio runoff and sales.

Our portfolio of loans serviced for others was $1.66 trillion at June 30, 2019, and $1.71 trillion at December 31, 2018. At June 30, 2019, the ratio of combined residential and commercial MSRs to related loans serviced for others was 0.82%, compared with 0.94% at December 31, 2018. See the "Risk Management – Asset/Liability Management – Mortgage Banking Interest Rate and Market Risk" section in this Report for additional information regarding our MSRs risks and hedging approach.

Net gains on mortgage loan origination/sales activities were $481 million and $825 million in the second quarter and first half of 2019, respectively, compared with $364 million and $830 million for the same periods a year ago. The increase in second quarter 2019, compared with the same period a year ago, was primarily due to higher production margins. The decrease in the first half of 2019, compared with the same period a year ago, was predominantly due to lower held for sale mortgage loan origination volumes, partially offset by higher margins and a higher repurchase reserve release in 2019. The production margin on residential held-for-sale mortgage loan originations, which represents net gains on residential mortgage loan origination/sales activities divided by total residential held-for-sale mortgage loan originations, provides a measure of the profitability of our residential mortgage origination activity. Table 2a presents the information used in determining the production margin.

Table 2a: Selected Mortgage Production Data

		Quarter ended June 30,		Six months ended June 30,	
		2019	2018	**2019**	2018
Net gains on mortgage loan origination/sales activities (in millions):					
Residential	(A)	**$ 322**	281	**$ 554**	605
Commercial		**83**	49	**130**	125
Residential pipeline and unsold/repurchased loan management (1)		**76**	34	**141**	100
Total		**$ 481**	364	**$ 825**	830
Residential real estate originations (in billions):					
Held-for-sale	(B)	**$ 33**	37	**$ 55**	71
Held-for-investment		**20**	13	**31**	22
Total		**$ 53**	50	**$ 86**	93
Production margin on residential held-for-sale mortgage loan originations	(A)/(B)	**0.98%**	0.77	**1.01%**	0.86

(1) Primarily includes the results of Government National Mortgage Association (GNMA) loss mitigation activities, interest rate management activities and changes in estimate to the liability for mortgage loan repurchase losses.

The production margin was 0.98% and 1.01% for the second quarter and first half of 2019, respectively, compared with 0.77% and 0.86% for the same periods a year ago. The increase in production margin in the second quarter and first half of 2019, compared with the same periods a year ago, was predominantly due to higher margins in our correspondent production channel and a shift to more retail origination volume, which has a higher production margin. Mortgage applications were $90 billion and $154 billion for the second quarter and first half of 2019, respectively, compared with $67 billion and $125 billion for the same periods a year ago. The 1-4 family first mortgage unclosed application pipeline was $44 billion at June 30, 2019, compared with $26 billion at June 30, 2018. For additional information about our mortgage banking activities and results, see the "Risk Management – Asset/Liability Management – Mortgage Banking Interest Rate and Market Risk" section and Note 11 (Mortgage Banking Activities) and Note 16 (Fair Values of Assets and Liabilities) to Financial Statements in this Report.

Insurance income was $93 million and $189 million in the second quarter and first half of 2019, respectively, compared with $102 million and $216 million in the same periods a year ago. The decrease in the first half of 2019, compared with the same period a year ago, was largely driven by the wind down of our personal insurance business activities.

Net gains from trading activities, which reflect unrealized changes in fair value of our trading positions and realized gains and losses, were $229 million and $586 million in the second quarter and first half of 2019, respectively, compared with $191 million and $434 million in the same periods a year ago. The increase in the second quarter and first half of 2019, compared with the same periods a year ago, was predominantly from the Corporate and Investment Banking business in our Wholesale operating segment driven by higher trading volumes on residential mortgage-backed securities (RMBS), partially offset by lower equity trading activity. The increase in the first half of 2019, compared with same period a year ago, was also driven by higher credit and municipal bond trading activity. Net gains from trading activities do not include interest and dividend income and expense on trading securities. Those amounts are reported within interest income from debt and equity securities and other interest expense. For additional information about trading activities, see the "Risk Management – Asset/Liability Management – Market Risk-Trading Activities" section and Note 4 (Trading Activities) to Financial Statements in this Report.

Net gains on debt and equity securities totaled $642 million and $1.6 billion in the second quarter and first half of 2019, respectively, compared with $336 million and $1.1 billion for the same periods a year ago, after other-than-temporary impairment (OTTI) write-downs of $38 million and $119 million for the second quarter and first half of 2019, respectively, compared with $245 million and $275 million for the same periods a year ago. The increase in net gains on debt and equity securities in the second quarter and first half of 2019, compared with the same periods a year ago, was predominantly driven by higher unrealized gains on equity securities and higher deferred compensation gains (offset in employee benefits expense), partially offset by lower net realized gains from nonmarketable equity securities. Table 3a presents results for our deferred compensation plan and related investments. The increase in the first half of 2019, compared with the same period a year ago, also reflected higher net gains on debt securities. The decrease in OTTI in the second quarter and first half of 2019, compared with same periods a year ago, was predominantly driven by a $214 million impairment related to the sale of our ownership stake in The Rock Creek Group, LP (RockCreek) in second quarter 2018.

Lease income was $424 million and $867 million in the second quarter and first half of 2019, respectively, compared with $443 million and $898 million for the same periods a year ago. The decreases in the second quarter and first half of 2019, compared with the same periods a year ago, were driven by lower equipment lease income. Lease income in second quarter 2019 also reflected lower gains on the sale of lease assets, compared with the same period a year ago.

All other income was $577 million and $992 million in the second quarter and first half of 2019, respectively, compared with $323 million and $761 million for the same periods a year ago. All other income includes hedge accounting results related to hedges of foreign currency risk, the results of certain economic hedges, losses on low income housing tax credit investments, foreign currency adjustments, and income from investments accounted for under the equity method, any of which can cause decreases and net losses in other income. All other income included $721 million and $1.3 billion of gains from the sales of purchased credit-impaired (PCI) Pick-a-Pay loans in the second quarter and first half of 2019, respectively, compared with $479 million and $1.1 billion for the same periods a year ago. The increase in all other income in the first half of 2019, compared with the same period a year ago, also reflected a pre-tax gain from the sale of Business Payroll Services in first quarter 2019 and a loss related to the sale of certain assets and liabilities of Reliable Financial Services, Inc. (a subsidiary of Wells Fargo's automobile financing business) in first quarter 2018, partially offset by a pretax gain from the sale of Wells Fargo Shareowner Services in first quarter 2018.

Noninterest Expense

Table 3: Noninterest Expense

(in millions)	Quarter ended June 30, 2019	2018	% Change	Six months ended June 30, 2019	2018	% Change
Salaries	$ **4,541**	4,465	2%	$ **8,966**	8,828	2%
Commission and incentive compensation	**2,597**	2,642	(2)	**5,442**	5,410	1
Employee benefits	**1,336**	1,245	7	**3,274**	2,843	15
Equipment	**607**	550	10	**1,268**	1,167	9
Net occupancy (1)	**719**	722	—	**1,436**	1,435	—
Core deposit and other intangibles	**27**	265	(90)	**55**	530	(90)
FDIC and other deposit assessments	**144**	297	(52)	**303**	621	(51)
Outside professional services	**821**	881	(7)	**1,499**	1,702	(12)
Contract services	**624**	536	16	**1,187**	983	21
Operating losses	**247**	619	(60)	**485**	2,087	(77)
Leases (2)	**311**	311	—	**597**	631	(5)
Advertising and promotion	**329**	227	45	**566**	380	49
Outside data processing	**175**	164	7	**342**	326	5
Travel and entertainment	**163**	157	4	**310**	309	—
Postage, stationery and supplies	**119**	121	(2)	**241**	263	(8)
Telecommunications	**93**	88	6	**184**	180	2
Foreclosed assets	**35**	44	(20)	**72**	82	(12)
Insurance	**25**	24	4	**50**	50	—
All other	**536**	624	(14)	**1,088**	1,197	(9)
Total	$ **13,449**	13,982	(4)	$ **27,365**	29,024	(6)

(1) Represents expenses for both leased and owned properties.
(2) Represents expenses for assets we lease to customers.

Noninterest expense was $13.4 billion in second quarter 2019, down 4% from $14.0 billion a year ago, and $27.4 billion in the first half of 2019, down 6% from the same period a year ago. The decrease in second quarter 2019, compared with the same period a year ago, was due to lower operating losses, core deposit and other intangibles expense, and FDIC and other deposit assessments, partially offset by higher personnel and advertising and promotion expenses. The decrease in the first half of 2019, compared with the same period a year ago, was predominantly due to lower operating losses.

Personnel expenses, which include salaries, commissions, incentive compensation, and employee benefits, were up $122 million, or 1%, in second quarter 2019, compared with the same period a year ago, and up $601 million, or 4%, in the first half of 2019, compared with the same period a year ago. The increase in second quarter 2019, compared with the same period a year ago, was due to annual salary increases and higher deferred compensation costs (offset in net gains from equity securities), partially offset by lower incentive compensation and lower staffing levels. The increase in the first half of 2019, compared with the same period a year ago, was due to higher deferred compensation costs (offset in net gains from equity securities), annual salary increases and the impact of staffing mix changes. Table 3a presents results for our deferred compensation plan and related investments.

Table 3a: Deferred Compensation Plan and Related Investments

(in millions)	Quarter ended Jun 30, 2019	Jun 30, 2018	Six months ended Jun 30, 2019	Jun 30, 2018
Net interest income	$ **18**	13	$ 31	23
Net gains (losses) from equity securities	**87**	37	432	31
Total revenue from deferred compensation plan investments	**105**	50	463	54
Employee benefits expense (1)	**114**	53	471	57
Income (loss) before income tax expense	$ **(9)**	(3)	$ (8)	(3)

(1) Represents change in deferred compensation plan liability.

Equipment expense was up $57 million, or 10%, in second quarter 2019, compared with the same period a year ago, and up $101 million, or 9%, in the first half of 2019, compared with the same period a year ago, in each case due to higher computer software licensing and maintenance and depreciation expense, partially offset by lower small furniture and equipment expense.

Core deposit and other intangibles expense was down $238 million, or 90%, in second quarter 2019, compared with the same period a year ago, and down $475 million, or 90%, in the first half of 2019, compared with the same period a year ago, in each case due to lower amortization expense reflecting the end of the 10-year amortization period on Wachovia intangibles.

Federal Deposit Insurance Corporation (FDIC) and other deposit assessments were down $153 million, or 52%, in second quarter 2019, compared with the same period a year ago, and down $318 million, or 51%, in the first half of 2019, compared with the same period a year ago. The decrease in both periods was due to the completion of the FDIC temporary surcharge, which ended September 30, 2018.

Outside professional and contract services expense was up $28 million, or 2%, in second quarter 2019, compared with the same period a year ago, and up $1 million in the first half of 2019, compared with the same period a year ago, reflecting an increase in project spending, partially offset by lower legal expenses in both periods.

Operating losses were down $372 million, or 60%, in second quarter 2019, compared with the same period a year ago, and down $1.6 billion, or 77%, in the first half of 2019, compared with the same period a year ago. The decrease in second quarter 2019, compared with the same period a year ago, reflected lower remediation expense, while the decrease in the first half of 2019, compared with the same period a year ago, was driven by lower litigation accruals. First quarter 2018 included an $800 million discrete litigation accrual in connection with entering into the consent orders with the CFPB and OCC on April 20, 2018.

Advertising and promotion expense was up $102 million, or 45%, in second quarter 2019, compared with the same period a year ago, and up $186 million, or 49%, in the first half of 2019, compared with the same period a year ago, in each case due to increases in marketing and brand campaign volumes.

All other expense was down $88 million, or 14%, in second quarter 2019, compared with the same period a year ago, and down $109 million, or 9%, in the first half of 2019, compared with the same period a year ago. The decrease in second quarter 2019, compared with the same period a year ago, reflected lower donations expense. The decrease in the first half of 2019, compared with the same period a year ago, included a state sales tax refund and lower donations expense.

Our efficiency ratio was 62.3% in second quarter 2019, compared with 64.9% in second quarter 2018.

Income Tax Expense

Our effective income tax rate was 17.3% and 15.3% for the second quarter and first half of 2019, respectively, compared with 25.9% and 23.6% for the same periods in 2018. The rate for the first half of 2019 reflected net discrete income tax benefits related to the results of U.S. federal and state income tax examinations. The rate in second quarter 2018 reflected a net discrete income tax expense of $481 million mostly related to state income taxes driven by the U.S. Supreme Court decision in *South Dakota v. Wayfair*. The rate for the first half of 2018 reflected the non-tax deductible treatment of an $800 million discrete litigation accrual recorded as noninterest expense in first quarter 2018 in connection with the consent orders entered into with the CFPB and OCC on April 20, 2018.

Operating Segment Results

We are organized for management reporting purposes into three operating segments: Community Banking; Wholesale Banking; and Wealth and Investment Management (WIM). These segments are defined by product type and customer segment and their results are based on our management accounting process, for which there is no comprehensive, authoritative financial accounting guidance equivalent to generally accepted accounting principles (GAAP). Table 4 and the following discussion present our results by operating segment. For additional description of our operating segments, including additional financial information and the underlying management accounting process, see Note 22 (Operating Segments) to Financial Statements in this Report.

Table 4: Operating Segment Results – Highlights

(income/expense in millions,	Community Banking		Wholesale Banking		Wealth and Investment Management		Other (1)		Consolidated Company	
average balances in billions)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Quarter ended June 30,										
Revenue	$ **11,805**	11,806	**7,065**	7,197	**4,050**	3,951	**(1,336)**	(1,401)	**21,584**	21,553
Provision (reversal of provision) for credit losses	**479**	484	**28**	(36)	**(1)**	(2)	**(3)**	6	**503**	452
Noninterest expense	**7,212**	7,290	**3,882**	4,219	**3,246**	3,361	**(891)**	(888)	**13,449**	13,982
Net income (loss)	**3,147**	2,496	**2,789**	2,635	**602**	445	**(332)**	(390)	**6,206**	5,186
Average loans	$ **457.7**	463.8	**474.0**	464.7	**75.0**	74.7	**(59.2)**	(59.1)	**947.5**	944.1
Average deposits	**777.6**	760.6	**410.4**	414.0	**143.5**	167.1	**(62.5)**	(70.4)	**1,269.0**	1,271.3
Six months ended June 30,										
Revenue	$ **23,555**	23,636	**14,176**	14,476	**8,129**	8,193	**(2,667)**	(2,818)	**43,193**	43,487
Provision (reversal of provision) for credit losses	**1,189**	702	**162**	(56)	**3**	(8)	**(6)**	5	**1,348**	643
Noninterest expense	**14,901**	15,992	**7,720**	8,197	**6,549**	6,651	**(1,805)**	(1,816)	**27,365**	29,024
Net income (loss)	**5,970**	4,409	**5,559**	5,510	**1,179**	1,159	**(642)**	(756)	**12,066**	10,322
Average loans	$ **457.9**	467.1	**475.2**	464.9	**74.7**	74.3	**(59.1)**	(58.8)	**948.7**	947.5
Average deposits	**771.6**	754.1	**410.1**	429.9	**148.3**	172.5	**(64.5)**	(72.3)	**1,265.5**	1,284.2

(1) Includes the elimination of certain items that are included in more than one business segment, which substantially represents products and services for WIM customers served through Community Banking distribution channels.

Community Banking offers a complete line of diversified financial products and services for consumers and small businesses including checking and savings accounts, credit and debit cards, and automobile, student, mortgage, home equity and small business lending, as well as referrals to Wholesale Banking and WIM business partners. The Community Banking segment also includes the results of our Corporate Treasury activities net of allocations (including funds transfer pricing, capital, liquidity and certain corporate expenses) in support of the other operating segments and results of investments in our affiliated venture capital and private equity partnerships. We have substantially completed the wind down of our personal insurance business, and we expect to fully exit this business by the end of 2019.

Table 4a provides additional financial information for Community Banking.

Table 4a: Community Banking

		Quarter ended June 30,				Six months ended June 30,		
(in millions, except average balances which are in billions)		**2019**	2018	% Change		**2019**	2018	% Change
Net interest income	$	**7,066**	7,346	(4)%	$	**14,314**	14,541	(2)%
Noninterest income:								
Service charges on deposit accounts		**704**	632	11		**1,314**	1,271	3
Trust and investment fees:								
Brokerage advisory, commissions and other fees (1)		**480**	465	3		**929**	943	(1)
Trust and investment management (1)		**199**	220	(10)		**409**	453	(10)
Investment banking (2)		**(18)**	—	NM		**(38)**	(10)	NM
Total trust and investment fees		**661**	685	(4)		**1,300**	1,386	(6)
Card fees		**929**	904	3		**1,787**	1,725	4
Other fees		**335**	348	(4)		**667**	675	(1)
Mortgage banking		**655**	695	(6)		**1,296**	1,537	(16)
Insurance		**11**	16	(31)		**22**	44	(50)
Net (losses) gains from trading activities		**(11)**	24	NM		**(6)**	23	NM
Net gains (losses) on debt securities		**15**	(2)	850		**52**	(2)	NM
Net gains from equity securities (3)		**471**	409	15		**1,072**	1,093	(2)
Other income of the segment		**969**	749	29		**1,737**	1,343	29
Total noninterest income		**4,739**	4,460	6		**9,241**	9,095	2
Total revenue		**11,805**	11,806	—		**23,555**	23,636	—
Provision for credit losses		**479**	484	(1)		**1,189**	702	69
Noninterest expense:								
Personnel expense		**5,436**	5,400	1		**11,417**	10,911	5
Equipment		**584**	525	11		**1,225**	1,121	9
Net occupancy		**542**	542	—		**1,084**	1,076	1
Core deposit and other intangibles		**—**	102	(100)		**1**	203	(100)
FDIC and other deposit assessments		**94**	155	(39)		**200**	336	(40)
Outside professional services		**387**	430	(10)		**703**	827	(15)
Operating losses		**197**	287	(31)		**416**	1,727	(76)
Other expense of the segment		**(28)**	(151)	81		**(145)**	(209)	31
Total noninterest expense		**7,212**	7,290	(1)		**14,901**	15,992	(7)
Income before income tax expense and noncontrolling interests		**4,114**	4,032	2		**7,465**	6,942	8
Income tax expense		**838**	1,413	(41)		**1,262**	2,222	(43)
Net income from noncontrolling interests (4)		**129**	123	5		**233**	311	(25)
Net income	$	**3,147**	2,496	26	$	**5,970**	4,409	35
Average loans	$	**457.7**	463.8	(1)	$	**457.9**	467.1	(2)
Average deposits		**777.6**	760.6	2		**771.6**	754.1	2

NM – Not meaningful
(1) Represents income on products and services for WIM customers served through Community Banking distribution channels which is offset in our WIM segment and eliminated in consolidation.
(2) Includes syndication and underwriting fees paid to Wells Fargo Securities which are offset in our Wholesale Banking segment and eliminated in consolidation.
(3) Mostly represents gains resulting from venture capital investments.
(4) Reflects results attributable to noncontrolling interests predominantly associated with the Company's consolidated venture capital investments.

Community Banking reported net income of $3.1 billion, up $651 million, or 26%, from second quarter 2018, and $6.0 billion for the first half of 2019, up $1.6 billion, or 35%, compared with the same period a year ago. Revenue of $11.8 billion was flat compared with second quarter 2018 and was $23.6 billion for the first half of 2019, a decrease of $81 million compared with the same period a year ago. Revenue in second quarter 2019 was flat, compared with the same period a year ago, as lower net interest income, mortgage banking income, and net gains from trading activities were offset by higher gains from the sales of Pick-a-Pay PCI mortgage loans, service charges on deposit accounts, and net gains from equity securities. The decrease in revenue in the first half of 2019, compared with the same period a year ago, was due to lower mortgage banking income, net interest income, and trust and investment fees, partially offset by higher gains from the sales of Pick-a-Pay PCI mortgage loans, card fees, and net gains from debt securities. Average loans of $457.7 billion in second quarter 2019 decreased $6.1 billion, or 1%, from second quarter 2018, and average loans of $457.9 billion in the first half of 2019 decreased $9.2 billion, or 2%, from the first half of 2018. The decline in average loans for both periods was predominantly due to lower junior lien mortgages and automobile loans, partially offset by higher real estate 1-4 family first mortgages and credit cards. Average deposits of $777.6 billion in second quarter 2019 increased $17.0 billion, or 2%, from second quarter 2018, and increased $17.5 billion, or 2%, from the first half of 2018.

Noninterest expense was $7.2 billion in second quarter 2019, down $78 million, or 1%, from second quarter 2018, and $14.9 billion in the first half of 2019, down $1.1 billion, or 7%, from the first half of 2018. The decrease in noninterest expense for both periods was predominantly due to lower operating losses, core deposit and other intangibles amortization, FDIC expense, and outside professional services, partially offset by higher personnel, equipment, contract services, and advertising and promotion expense. The provision for credit losses was down $5 million from second quarter 2018 and up $487 million from the first half of 2018. The increase in the provision for credit losses in the first half of 2019, compared with the same period a year ago, was due to an allowance release in the first half of 2018, partially offset by lower net charge-offs in the automobile portfolio in the first half of 2019. Income tax expense decreased $575 million from second quarter 2018, driven by a net discrete income tax expense of $481 million in second quarter 2018 mostly related to state income taxes. Income tax expense decreased $960 million in the first half of 2019, compared with the same period a year ago, driven by net discrete income tax benefits in the first half of 2019 related mostly to the results of U.S. federal and state income tax examinations as well as the aforementioned net discrete income tax expense in the first half of 2018.

Wholesale Banking provides financial solutions to businesses across the United States and globally with annual sales generally in excess of $5 million. Products and businesses include Commercial Banking, Commercial Real Estate, Corporate and Investment Banking, Credit Investment Portfolio, Treasury Management, and Commercial Capital. Table 4b provides additional financial information for Wholesale Banking.

Table 4b: Wholesale Banking

(in millions, except average balances which are in billions)	Quarter ended June 30, 2019	2018	% Change	Six months ended June 30, 2019	2018	% Change
Net interest income	$ **4,535**	4,693	(3)%	$ **9,069**	9,225	(2)%
Noninterest income:						
Service charges on deposit accounts	**502**	530	(5)	**985**	1,064	(7)
Trust and investment fees:						
Brokerage advisory, commissions and other fees	**74**	78	(5)	**152**	145	5
Trust and investment management	**117**	110	6	**231**	223	4
Investment banking	**475**	485	(2)	**887**	925	(4)
Total trust and investment fees	**666**	673	(1)	**1,270**	1,293	(2)
Card fees	**95**	96	(1)	**181**	183	(1)
Other fees	**464**	496	(6)	**901**	968	(7)
Mortgage banking	**104**	75	39	**172**	168	2
Insurance	**75**	78	(4)	**153**	157	(3)
Net gains from trading activities	**226**	154	47	**559**	379	47
Net gains on debt securities	**5**	42	(88)	**93**	43	116
Net gains from equity securities	**116**	89	30	**193**	182	6
Other income of the segment	**277**	271	2	**600**	814	(26)
Total noninterest income	**2,530**	2,504	1	**5,107**	5,251	(3)
Total revenue	**7,065**	7,197	(2)	**14,176**	14,476	(2)
Provision (reversal of provision) for credit losses	**28**	(36)	178	**162**	(56)	389
Noninterest expense:						
Personnel expense	**1,384**	1,386	—	**2,894**	2,922	(1)
Equipment	**10**	14	(29)	**19**	26	(27)
Net occupancy	**96**	100	(4)	**191**	200	(5)
Core deposit and other intangibles	**23**	94	(76)	**47**	189	(75)
FDIC and other deposit assessments	**44**	122	(64)	**89**	244	(64)
Outside professional services	**231**	255	(9)	**415**	488	(15)
Operating losses	**10**	208	(95)	**11**	216	(95)
Other expense of the segment	**2,084**	2,040	2	**4,054**	3,912	4
Total noninterest expense	**3,882**	4,219	(8)	**7,720**	8,197	(6)
Income before income tax expense and noncontrolling interests	**3,155**	3,014	5	**6,294**	6,335	(1)
Income tax expense	**365**	379	(4)	**734**	827	(11)
Net loss from noncontrolling interests	**1**	—	NM	**1**	(2)	150
Net income	$ **2,789**	2,635	6	$ **5,559**	5,510	1
Average loans	$ **474.0**	464.7	2	$ **475.2**	464.9	2
Average deposits	**410.4**	414.0	(1)	**410.1**	429.9	(5)

NM – Not meaningful

Wholesale Banking reported net income of $2.8 billion in second quarter 2019, up $154 million, or 6%, from second quarter 2018. In the first half of 2019, net income of $5.6 billion increased $49.0 million, or 1%, from the same period a year ago. Revenue decreased $132 million, or 2%, from second quarter 2018, largely due to lower net interest income and treasury management fees, partially offset by higher market sensitive revenue and mortgage banking fees. Revenue decreased $300 million, or 2%, from the first half of 2018, predominantly due to the gain related to the sale of Wells Fargo Shareowner Services in first quarter 2018 and lower net interest income, partially offset by higher market sensitive revenue. Net interest income decreased $158 million, or 3%, from second quarter 2018, and $156 million, or 2%, from the first half of 2018, as lower income on trading and debt investments and lower income on loans due to spread compression was partially offset by higher average loan balances and the positive impact of higher interest rates. Noninterest income increased $26 million, or 1%, from second quarter 2018, as higher market sensitive revenue was partially offset by lower treasury management fees related to an increased earnings credit rate provided to customers. Noninterest income decreased $144 million, or 3%, from the first half of 2018 predominantly due to the gain related to the sale of Wells Fargo Shareowner Services in first quarter 2018, lower treasury management fees, loan fees, and investment banking fees, partially offset by higher market sensitive revenue. Average loans of $474.0 billion in second quarter 2019 increased $9.3 billion, or 2%, from second quarter 2018, and average loans of

$475.2 billion in the first half of 2019 increased $10.3 billion, or 2%, from the first half of 2018, as growth in commercial and industrial loans was partially offset by lower commercial real estate loans. Average deposits of $410.4 billion in second quarter 2019 decreased $3.6 billion, or 1%, from second quarter 2018, and average deposits of $410.1 billion in the first half of 2019 decreased $19.8 billion, or 5%, from the first half of 2018. The decline in average deposits for both periods was driven by declines across many businesses as commercial customers allocated more cash to alternative higher-rate liquid investments. The decline from the first half of 2018 was also affected by actions taken in 2018 in response to the asset cap included in the FRB consent order on February 2, 2018. Noninterest expense decreased $337 million, or 8%, from second quarter 2018, and decreased $477 million, or 6%, from the first half of 2018 as lower operating losses, FDIC expense, and core deposit and other intangibles amortization, were partially offset by higher regulatory, risk, and technology expenses. The provision for credit losses increased $64 million from second quarter 2018, and $218 million from the first half of 2018, reflecting higher charge-offs and lower recoveries.

Wealth and Investment Management provides a full range of personalized wealth management, investment and retirement products and services to clients across U.S. based businesses including Wells Fargo Advisors, The Private Bank, Abbot Downing, Wells Fargo Institutional Retirement and Trust, and Wells Fargo Asset Management. We deliver financial planning, private banking, credit, investment management and fiduciary services to high-net worth and ultra-high-net worth individuals and families. We also serve clients' brokerage needs, supply retirement and trust services to institutional clients and provide investment management capabilities delivered to global institutional clients through separate accounts and the Wells Fargo Funds. The previously announced sale of our IRT business closed on July 1, 2019. For additional information on the IRT sale, including its anticipated impact on our AUA and associated revenue and expenses, see the "Noninterest Income" section in this Report. Table 4c provides additional financial information for WIM.

Table 4c: Wealth and Investment Management

	Quarter ended June 30,			Six months ended June 30,		
(in millions, except average balances which are in billions)	2019	2018	% Change	2019	2018	% Change
Net interest income	$ **1,037**	1,111	(7)%	$ **2,138**	2,223	(4)%
Noninterest income:						
Service charges on deposit accounts	**4**	5	(20)	**8**	9	(11)
Trust and investment fees:						
Brokerage advisory, commissions and other fees	**2,248**	2,284	(2)	**4,372**	4,628	(6)
Trust and investment management	**687**	731	(6)	**1,363**	1,474	(8)
Investment banking	**(1)**	1	NM	**4**	1	300
Total trust and investment fees	**2,934**	3,016	(3)	**5,739**	6,103	(6)
Card fees	**2**	2	—	**3**	3	—
Other fees	**4**	5	(20)	**8**	9	(11)
Mortgage banking	**(3)**	(2)	(50)	**(6)**	(5)	(20)
Insurance	**17**	18	(6)	**34**	36	(6)
Net gains from trading activities	**13**	13	—	**32**	32	—
Net gains on debt securities	**—**	1	(100)	**—**	1	(100)
Net gains (losses) from equity securities	**35**	(203)	117	**171**	(197)	187
Other income of the segment	**7**	(15)	147	**2**	(21)	110
Total noninterest income	**3,013**	2,840	6	**5,991**	5,970	—
Total revenue	**4,050**	3,951	3	**8,129**	8,193	(1)
Provision (reversal of provision) for credit losses	**(1)**	(2)	50	**3**	(8)	138
Noninterest expense:						
Personnel expense	**2,112**	2,037	4	**4,309**	4,202	3
Equipment	**14**	11	27	**25**	21	19
Net occupancy	**112**	110	2	**224**	219	2
Core deposit and other intangibles	**4**	69	(94)	**7**	138	(95)
FDIC and other deposit assessments	**12**	34	(65)	**26**	70	(63)
Outside professional services	**210**	202	4	**394**	400	(2)
Operating losses	**43**	127	(66)	**64**	149	(57)
Other expense of the segment	**739**	771	(4)	**1,500**	1,452	3
Total noninterest expense	**3,246**	3,361	(3)	**6,549**	6,651	(2)
Income before income tax expense and noncontrolling interests	**805**	592	36	**1,577**	1,550	2
Income tax expense	**201**	147	37	**393**	386	2
Net income from noncontrolling interests	**2**	—	NM	**5**	5	—
Net income	$ **602**	445	35	$ **1,179**	1,159	2
Average loans	$ **75.0**	74.7	—	$ **74.7**	74.3	1
Average deposits	**143.5**	167.1	(14)	**148.3**	172.5	(14)

NM – Not meaningful

WIM reported net income of $602 million in second quarter 2019, up $157 million, or 35%, from second quarter 2018. Net income for the first half of 2019 was $1.2 billion, up $20 million, or 2%, from the same period a year ago. Revenue was up $99 million, or 3%, from second quarter 2018, and down $64 million, or 1%, from the first half of 2018. Revenue in second quarter 2019 was up from second quarter 2018 largely due to the 2018 impairment on the sale of our ownership stake in RockCreek and higher deferred compensation plan investments (offset in employee benefits expense), partially offset by lower trust and investment fees and lower net interest income. Revenue in the first half of 2019 was down from the first half of 2018 predominantly due to lower trust and investment fees and lower net interest income, partially offset by the 2018 impairment on the sale of our ownership stake in RockCreek and higher deferred compensation plan investments (offset in employee benefits expense). Net interest income decreased 7% from second quarter 2018, and 4% from the first half of 2018, primarily driven by lower deposit balances in both periods. Noninterest income increased $173 million from second quarter 2018, and $21 million from the first half of 2018, in both periods primarily due to the 2018 impairment on the sale of our ownership stake in RockCreek and higher deferred compensation plan investments (offset in employee benefits expense), partially offset by lower asset-based fees and lower brokerage transaction revenue. Asset-based fees decreased due to lower brokerage advisory account client assets driven by lower market valuations at the end of 2018. Average loans of $75.0 billion in second quarter 2019 were flat compared with the same period a year ago, while average loans of $74.7 billion in the first half of 2019 increased 1% from the same period a year ago, driven by growth in nonconforming mortgage loans. Average deposits of $143.5 billion in second quarter 2019 decreased $23.6 billion, or 14%, from second quarter 2018, and average deposits of $148.3 billion in the first half of 2019 decreased $24.2 billion, or 14%, from the first half of 2018, as customers continued to allocate more cash into higher yielding liquid alternatives. Noninterest expense was down 3% from second quarter 2018, and down 2% from the first half of 2018, in both periods driven by lower core deposit and other intangibles amortization expense, lower operating losses, and lower broker commissions, partially offset by higher employee benefits expense primarily from higher deferred compensation plan expense (offset in net gains from equity securities). Second quarter 2018 operating losses included $114 million of non-litigation expense related to fee calculations within certain fiduciary and custody accounts in our wealth management business. The provision for credit losses increased $1 million from second quarter 2018 and $11 million from the first half of 2018.

The following discussions provide additional information for client assets we oversee in our retail brokerage advisory and trust and investment management business lines.

Retail Brokerage Client Assets Brokerage advisory, commissions and other fees are received for providing full-service and discount brokerage services predominantly to retail brokerage clients. Offering advisory account relationships to our brokerage clients is an important component of our broader strategy of meeting their financial needs. Although a majority of our retail brokerage client assets are in accounts that earn brokerage commissions, the fees from those accounts generally represent transactional commissions based on the number and size of transactions executed at the client's direction. Fees from advisory accounts are based on a percentage of the market value of the assets as of the beginning of the quarter, which vary across the account types based on the distinct services provided, and are affected by investment performance as well as asset inflows and outflows. A majority of our brokerage advisory, commissions and other fee income is earned from advisory accounts. Table 4d shows advisory account client assets as a percentage of total retail brokerage client assets at June 30, 2019 and 2018.

Table 4d: Retail Brokerage Client Assets

	June 30,	
($ in billions)	**2019**	2018
Retail brokerage client assets	$ **1,620.5**	1,623.7
Advisory account client assets	**561.3**	542.6
Advisory account client assets as a percentage of total client assets	**35%**	33

Retail Brokerage advisory accounts include assets that are financial advisor-directed and separately managed by third-party managers, as well as certain client-directed brokerage assets where we earn a fee for advisory and other services, but do not have investment discretion. For second quarter 2019 and 2018, the average fee rate by account type ranged from 80 to 120 basis points. Table 4e presents retail brokerage advisory account client assets activity by account type for the second quarter and first half of 2019 and 2018.

Table 4e: Retail Brokerage Advisory Account Client Assets

	Quarter ended					Six months ended				
(in billions)	Balance, beginning of period	Inflows (1)	Outflows (2)	Market impact (3)	Balance, end of period	Balance, beginning of period	Inflows (1)	Outflows (2)	Market impact (3)	Balance, end of period
June 30, 2019										
Client directed (4)	**$ 163.6**	**8.6**	**(9.7)**	**3.7**	**166.2**	**$ 151.5**	**16.5**	**(19.0)**	**17.2**	**166.2**
Financial advisor directed (5)	**156.9**	**8.6**	**(8.7)**	**6.4**	**163.2**	**141.9**	**16.1**	**(16.4)**	**21.6**	**163.2**
Separate accounts (6)	**148.3**	**6.2**	**(8.0)**	**5.4**	**151.9**	**136.4**	**11.8**	**(14.9)**	**18.6**	**151.9**
Mutual fund advisory (7)	**77.9**	**2.9**	**(3.5)**	**2.7**	**80.0**	**71.3**	**5.7**	**(6.7)**	**9.7**	**80.0**
Total advisory client assets	**$ 546.7**	**26.3**	**(29.9)**	**18.2**	**561.3**	**$ 501.1**	**50.1**	**(57.0)**	**67.1**	**561.3**
June 30, 2018										
Client directed (4)	$ 168.4	8.2	(11.1)	2.0	167.5	$ 170.9	17.6	(20.3)	(0.7)	167.5
Financial advisor directed (5)	148.6	7.5	(9.5)	3.4	150.0	147.0	15.6	(16.5)	3.9	150.0
Separate accounts (6)	146.6	5.6	(7.0)	2.0	147.2	149.1	12.4	(14.3)	—	147.2
Mutual fund advisory (7)	76.8	3.2	(3.3)	1.2	77.9	75.8	7.2	(6.3)	1.2	77.9
Total advisory client assets	$ 540.4	24.5	(30.9)	8.6	542.6	$ 542.8	52.8	(57.4)	4.4	542.6

(1) Inflows include new advisory account assets, contributions, dividends and interest.
(2) Outflows include closed advisory account assets, withdrawals, and client management fees.
(3) Market impact reflects gains and losses on portfolio investments.
(4) Investment advice and other services are provided to client, but decisions are made by the client and the fees earned are based on a percentage of the advisory account assets, not the number and size of transactions executed by the client.
(5) Professionally managed portfolios with fees earned based on respective strategies and as a percentage of certain client assets.
(6) Professional advisory portfolios managed by Wells Fargo Asset Management or third-party asset managers. Fees are earned based on a percentage of certain client assets.
(7) Program with portfolios constructed of load-waived, no-load and institutional share class mutual funds. Fees are earned based on a percentage of certain client assets.

Trust and Investment Client Assets Under Management
We earn trust and investment management fees from managing and administering assets, including mutual funds, institutional separate accounts, personal trust, employee benefit trust and agency assets through our asset management, wealth and retirement businesses. Our asset management business is conducted by Wells Fargo Asset Management (WFAM), which offers Wells Fargo proprietary mutual funds and manages institutional separate accounts. Our wealth business manages assets for high net worth clients, and our retirement business provides total retirement management, investments, and trust and custody solutions tailored to meet the needs of institutional clients. Substantially all of our trust and investment management fee income is earned from AUM where we have discretionary management authority over the investments and generate fees as a percentage of the market value of the AUM. Table 4f presents AUM activity for the second quarter and first half of 2019 and 2018.

Table 4f: WIM Trust and Investment – Assets Under Management

	Quarter ended					Six months ended				
(in billions)	Balance, beginning of period	Inflows (1)	Outflows (2)	Market impact (3)	Balance, end of period	Balance, beginning of period	Inflows (1)	Outflows (2)	Market impact (3)	Balance, end of period
June 30, 2019										
Assets managed by WFAM (4):										
Money market funds (5)	**$ 109.5**	**10.3**	**—**	**—**	**119.8**	**$ 112.4**	**7.4**	**—**	**—**	**119.8**
Other assets managed	**367.0**	**22.2**	**(23.0)**	**9.1**	**375.3**	**353.5**	**41.5**	**(44.9)**	**25.2**	**375.3**
Assets managed by Wealth and Retirement (6)	**181.4**	**8.2**	**(11.2)**	**3.5**	**181.9**	**170.7**	**17.4**	**(21.6)**	**15.4**	**181.9**
Total assets under management	**$ 657.9**	**40.7**	**(34.2)**	**12.6**	**677.0**	**$ 636.6**	**66.3**	**(66.5)**	**40.6**	**677.0**
June 30, 2018										
Assets managed by WFAM (4):										
Money market funds (5)	$ 105.0	2.7	—	—	107.7	$ 108.2	—	(0.5)	—	107.7
Other assets managed	391.8	20.9	(27.3)	1.1	386.5	395.7	46.6	(56.5)	0.7	386.5
Assets managed by Wealth and Retirement (6)	183.3	9.1	(10.3)	1.1	183.2	186.2	19.5	(21.7)	(0.8)	183.2
Total assets under management	$ 680.1	32.7	(37.6)	2.2	677.4	$ 690.1	66.1	(78.7)	(0.1)	677.4

(1) Inflows include new managed account assets, contributions, dividends and interest.
(2) Outflows include closed managed account assets, withdrawals and client management fees.
(3) Market impact reflects gains and losses on portfolio investments.
(4) Assets managed by WFAM consist of equity, alternative, balanced, fixed income, money market, and stable value, and include client assets that are managed or sub-advised on behalf of other Wells Fargo lines of business.
(5) Money Market funds activity is presented on a net inflow or net outflow basis, because the gross flows are not meaningful nor used by management as an indicator of performance.
(6) Includes \$4.5 billion and \$5.2 billion as of June 30, 2019 and 2018, respectively, of client assets invested in proprietary funds managed by WFAM.

Balance Sheet Analysis

At June 30, 2019, our assets totaled $1.92 trillion, up $27.5 billion from December 31, 2018. The asset growth was driven by increases in federal funds sold and securities purchased under resale agreements and equity securities, which increased by $31.9 billion and $6.4 billion, respectively, from December 31, 2018. Liabilities totaled $1.72 trillion, up $24.5 billion from December 31, 2018. The increase in liabilities was due to increases in short-term borrowings and long-term debt, which increased by $9.6 billion and $12.4 billion, respectively, from December 31, 2018. Total equity increased by $3.0 billion from December 31, 2018, predominantly due to a $4.1 billion increase in cumulative other comprehensive income driven largely by the increase in fair value of available-for-sale debt securities, and a $6.4 billion increase in retained earnings, net of dividends paid, partially offset by a $7.6 billion increase in treasury stock.

The following discussion provides additional information about the major components of our balance sheet. Information regarding our capital and changes in our asset mix is included in the "Earnings Performance – Net Interest Income" and "Capital Management" sections and Note 23 (Regulatory and Agency Capital Requirements) to Financial Statements in this Report.

Available-for-Sale and Held-to-Maturity Debt Securities

Table 5: Available-for-Sale and Held-to-Maturity Debt Securities

		June 30, 2019			December 31, 2018	
(in millions)	Amortized cost	Net unrealized gain (loss)	Fair value	Amortized cost	Net unrealized gain (loss)	Fair value
Available-for-sale	263,458	2,525	265,983	272,471	(2,559)	269,912
Held-to-maturity	145,876	1,988	147,864	144,788	(2,673)	142,115
Total (1)	$ 409,334	4,513	413,847	417,259	(5,232)	412,027

(1) Available-for-sale debt securities are carried on the balance sheet at fair value. Held-to-maturity debt securities are carried on the balance sheet at amortized cost.

Table 5 presents a summary of our available-for-sale and held-to-maturity debt securities, which decreased $2.8 billion in balance sheet carrying value from December 31, 2018, largely due to net declines in securities of U.S. states and political subdivisions and collateralized debt obligations, partially offset by net purchases of U.S. Treasury and federal agency debt securities.

The total net unrealized gains on available-for-sale debt securities were $2.5 billion at June 30, 2019, up from net unrealized losses of $2.6 billion at December 31, 2018, primarily due to lower U.S. interest rates. For a discussion of our investment management objectives and practices, see the "Balance Sheet Analysis" section in our 2018 Form 10-K. Also, see the "Risk Management – Asset/Liability Management" section in this Report for information on our use of investments to manage liquidity and interest rate risk.

We analyze debt securities for OTTI quarterly or more often if a potential loss-triggering event occurs. In the first half of 2019, we recognized $52 million of OTTI write-downs on debt securities. For a discussion of our OTTI accounting policies and underlying considerations and analysis, see Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K and Note 5 (Available-for-Sale and Held-to-Maturity Debt Securities) to Financial Statements in this Report.

At June 30, 2019, debt securities included $53.0 billion of municipal bonds, of which 96.1% were rated "A-" or better based predominantly on external and, in some cases, internal ratings. Additionally, some of the debt securities in our total municipal bond portfolio are guaranteed against loss by bond insurers. These guaranteed bonds are predominantly investment grade and were generally underwritten in accordance with our own investment standards prior to the determination to purchase, without relying on the bond insurer's guarantee in making the investment decision. The credit quality of our municipal bond holdings are monitored as part of our ongoing impairment analysis.

The weighted-average expected maturity of debt securities available-for-sale was 5.0 years at June 30, 2019. The expected remaining maturity is shorter than the remaining contractual maturity for the 61% of this portfolio that is mortgage-backed securities (MBS) because borrowers generally have the right to prepay obligations before the underlying mortgages mature. The estimated effects of a 200 basis point increase or decrease in interest rates on the fair value and the expected remaining maturity of the MBS available-for-sale portfolio are shown in Table 6.

Table 6: Mortgage-Backed Securities Available for Sale

(in billions)	Fair value	Net unrealized gain (loss)	Expected remaining maturity (in years)
At June 30, 2019			
Actual	$ 161.3	1.4	4.5
Assuming a 200 basis point:			
Increase in interest rates	146.0	(13.9)	6.8
Decrease in interest rates	170.7	10.8	3.3

The weighted-average expected maturity of debt securities held-to-maturity (HTM) was 4.5 years at June 30, 2019. HTM debt securities are measured at amortized cost and, therefore, changes in the fair value of our held-to-maturity MBS resulting from changes in interest rates are not recognized in our financial results. See Note 5 (Available-for-Sale and Held-to-Maturity Debt Securities) to Financial Statements in this Report for a summary of debt securities by security type.

Loan Portfolios

Table 7 provides a summary of total outstanding loans by portfolio segment. Total loans decreased $3.2 billion from December 31, 2018, with a decline in both commercial and consumer loans. Consumer loans were down $2.1 billion from December 31, 2018, as growth in the real estate 1-4 family first mortgage and automobile loan portfolios was more than offset by the sale of $3.5 billion of Pick-a-Pay PCI loans, the reclassification of $1.8 billion of real estate 1-4 family first mortgage loans to MLHFS, and a decline in junior lien mortgage loans as paydowns continued to exceed originations in the first half of 2019. Commercial loans were down $1.2 billion from December 31, 2018, as growth in our credit investment portfolio was more than offset by declines across several commercial industry categories.

Table 7: Loan Portfolios

(in millions)		June 30, 2019	December 31, 2018
Commercial	$	**512,245**	513,405
Consumer		**437,633**	439,705
Total loans	$	**949,878**	953,110
Change from prior year-end	$	**(3,232)**	(3,660)

A discussion of average loan balances and a comparative detail of average loan balances is included in Table 1 under “Earnings Performance – Net Interest Income” earlier in this Report. Additional information on total loans outstanding by portfolio segment and class of financing receivable is included in the “Risk Management – Credit Risk Management” section in this Report. Period-end balances and other loan related information are in Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Table 8 shows contractual loan maturities for loan categories normally not subject to regular periodic principal reduction and the contractual distribution of loans in those categories to changes in interest rates.

Table 8: Maturities for Selected Commercial Loan Categories

		June 30, 2019				December 31, 2018			
(in millions)		Within one year	After one year through five years	After five years	Total	Within one year	After one year through five years	After five years	Total
Selected loan maturities:									
Commercial and industrial	$	**109,939**	**210,083**	**28,824**	**348,846**	109,566	213,425	27,208	350,199
Real estate mortgage		**16,089**	**65,324**	**41,595**	**123,008**	16,413	63,648	40,953	121,014
Real estate construction		**9,663**	**10,575**	**829**	**21,067**	9,958	11,343	1,195	22,496
Total selected loans	$	**135,691**	**285,982**	**71,248**	**492,921**	135,937	288,416	69,356	493,709
Distribution of loans to changes in interest rates:									
Loans at fixed interest rates	$	**17,815**	**26,912**	**28,872**	**73,599**	17,619	28,545	28,163	74,327
Loans at floating/variable interest rates		**117,876**	**259,070**	**42,376**	**419,322**	118,318	259,871	41,193	419,382
Total selected loans	$	**135,691**	**285,982**	**71,248**	**492,921**	135,937	288,416	69,356	493,709

Deposits

Deposits were $1.3 trillion at June 30, 2019, up $2.3 billion from December 31, 2018, due to an increase in mortgage escrow deposits reflecting an inflow of higher mortgage payoffs to be remitted to investors in accordance with servicing contracts, partially offset by a decrease in consumer and small business banking deposits. The decrease in consumer and small business banking deposits was driven by seasonality as well as higher balance customers moving a portion of those balances to other higher rate liquid alternatives, partially offset by growth in certificates of deposit (CDs) and high-yield savings that was driven by an increase in promotional activity. Table 9 provides additional information regarding deposits. Information regarding the impact of deposits on net interest income and a comparison of average deposit balances is provided in the "Earnings Performance – Net Interest Income" section and Table 1 earlier in this Report.

Table 9: Deposits

($ in millions)		Jun 30, 2019	% of total deposits		Dec 31, 2018	% of total deposits	% Change
Noninterest-bearing	$	**340,813**	**26%**	$	349,534	27%	(2)
Interest-bearing checking		**54,722**	**4**		56,797	4	(4)
Market rate and other savings		**713,219**	**56**		703,338	55	1
Savings certificates		**32,379**	**3**		22,648	2	43
Other time deposits		**93,868**	**7**		95,602	7	(2)
Deposits in foreign offices (1)		**53,425**	**4**		58,251	5	(8)
Total deposits	$	**1,288,426**	**100%**	$	1,286,170	100%	—

(1) Includes Eurodollar sweep balances of $26.4 billion and $31.8 billion at June 30, 2019, and December 31, 2018, respectively.

Fair Value of Financial Instruments

We use fair value measurements to record fair value adjustments to certain financial instruments and to determine fair value disclosures. See the "Critical Accounting Policies" section in our 2018 Form 10-K and Note 16 (Fair Values of Assets and Liabilities) to Financial Statements in this Report for a description of our critical accounting policy related to fair value of financial instruments and a discussion of our fair value measurement techniques.

Table 10 presents the summary of the fair value of financial instruments recorded at fair value on a recurring basis, and the amounts measured using significant Level 3 inputs (before derivative netting adjustments). The fair value of the remaining assets and liabilities were measured using valuation methodologies involving market-based or market-derived information (collectively Level 1 and 2 measurements).

Table 10: Fair Value Level 3 Summary

		June 30, 2019		December 31, 2018	
($ in billions)		Total balance	Level 3 (1)	Total balance	Level 3 (1)
Assets carried at fair value	$	**415.1**	**24.9**	408.4	25.3
As a percentage of total assets		**22%**	**1**	22	1
Liabilities carried at fair value	$	**24.4**	**2.3**	28.2	1.6
As a percentage of total liabilities		**1%**	*	2	*

* Less than 1%.
(1) Before derivative netting adjustments.

See Note 16 (Fair Values of Assets and Liabilities) to Financial Statements in this Report for additional information on fair value measurements and a description of the Level 1, 2 and 3 fair value hierarchy.

Equity

Total equity was $200.0 billion at June 30, 2019, compared with $197.1 billion at December 31, 2018. The increase was driven by a $4.1 billion increase in cumulative other comprehensive income primarily due to a decrease in U.S. interest rates resulting in an increase in the value of available-for-sale debt securities, and a $6.4 billion increase in retained earnings net of dividends paid, partially offset by a $7.6 billion increase in treasury stock.

Off-Balance Sheet Arrangements

In the ordinary course of business, we engage in financial transactions that are not recorded on the balance sheet, or may be recorded on the balance sheet in amounts that are different from the full contract or notional amount of the transaction. Our off-balance sheet arrangements include commitments to lend and purchase debt and equity securities, transactions with unconsolidated entities, guarantees, derivatives, and other commitments. These transactions are designed to (1) meet the financial needs of customers, (2) manage our credit, market or liquidity risks, and/or (3) diversify our funding sources.

Commitments to Lend and Purchase Debt and Equity Securities

We enter into commitments to lend funds to customers, which are usually at a stated interest rate, if funded, and for specific purposes and time periods. When we make commitments, we are exposed to credit risk. However, the maximum credit risk for these commitments will generally be lower than the contractual amount because a significant portion of these commitments is expected to expire without being used by the customer. For more information on lending commitments, see Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report. We also enter into commitments to purchase securities under resale agreements. For more information on commitments to purchase securities under resale agreements, see Note 13 (Guarantees, Pledged Assets and Collateral, and Other Commitments) to Financial Statements in this Report. We also may enter into commitments to purchase debt and equity securities to provide capital for customers' funding, liquidity or other future needs. For more information, see the "Off-Balance Sheet Arrangements – Contractual Cash Obligations" section in our 2018 Form 10-K and Note 13 (Guarantees, Pledged Assets and Collateral, and Other Commitments) to Financial Statements in this Report.

Transactions with Unconsolidated Entities

In the normal course of business, we enter into various types of on- and off-balance sheet transactions with special purpose entities (SPEs), which are corporations, trusts, limited liability companies or partnerships that are established for a limited purpose. Generally, SPEs are formed in connection with securitization transactions and are considered variable interest entities (VIEs). For more information on securitizations, including sales proceeds and cash flows from securitizations, see Note 10 (Securitizations and Variable Interest Entities) to Financial Statements in this Report.

Guarantees and Certain Contingent Arrangements

Guarantees are contracts that contingently require us to make payments to a guaranteed party based on an event or a change in an underlying asset, liability, rate or index. Guarantees are generally in the form of standby letters of credit, securities lending and other indemnifications, written put options, recourse obligations and other types of similar arrangements. For more information on guarantees and certain contingent arrangements, see Note 13 (Guarantees, Pledged Assets and Collateral, and Other Commitments) to Financial Statements in this Report.

Derivatives

We use derivatives to manage exposure to market risk, including interest rate risk, credit risk and foreign currency risk, and to assist customers with their risk management objectives. Derivatives are recorded on the balance sheet at fair value, and volume can be measured in terms of the notional amount, which is generally not exchanged but is used only as the basis on which interest and other payments are determined. The notional amount is not recorded on the balance sheet and is not, when viewed in isolation, a meaningful measure of the risk profile of the instruments. For more information on derivatives, see Note 15 (Derivatives) to Financial Statements in this Report.

Wells Fargo manages a variety of risks that can significantly affect our financial performance and our ability to meet the expectations of our customers, shareholders, regulators and other stakeholders. We operate under a Board approved risk management framework which outlines our company-wide approach to risk management and oversight and describes the structures and practices employed to manage current and emerging risks inherent to Wells Fargo. For more information about how we manage risk, see the "Risk Management" section in our 2018 Form 10-K. The discussion that follows supplements our discussion of the management of certain risks contained in the "Risk Management" section in our 2018 Form 10-K.

Credit Risk Management

We define credit risk as the risk of loss associated with a borrower or counterparty default (failure to meet obligations in accordance with agreed upon terms). Credit risk exists with many of our assets and exposures such as debt security holdings, certain derivatives, and loans.

The Board's Credit Committee has primary oversight responsibility for credit risk. At the management level, the Corporate Credit function, which is part of Corporate Risk, has primary oversight responsibility for credit risk. The Corporate Credit function reports to the Chief Risk Officer (CRO) and also provides periodic reporting related to credit risk to the Board's Credit Committee. In addition, the Risk & Control Committee for each business group and enterprise function reports credit risk matters to the Enterprise Risk & Control Committee.

The following discussion focuses on our loan portfolios, which represent the largest component of assets on our balance sheet for which we have credit risk. Table 11 presents our total loans outstanding by portfolio segment and class of financing receivable.

Table 11: Total Loans Outstanding by Portfolio Segment and Class of Financing Receivable

(in millions)	Jun 30, 2019	Dec 31, 2018
Commercial:		
Commercial and industrial	$ **348,846**	350,199
Real estate mortgage	**123,008**	121,014
Real estate construction	**21,067**	22,496
Lease financing	**19,324**	19,696
Total commercial	**512,245**	513,405
Consumer:		
Real estate 1-4 family first mortgage	**286,427**	285,065
Real estate 1-4 family junior lien mortgage	**32,068**	34,398
Credit card	**38,820**	39,025
Automobile	**45,664**	45,069
Other revolving credit and installment	**34,654**	36,148
Total consumer	**437,633**	439,705
Total loans	$ **949,878**	953,110

We manage our credit risk by establishing what we believe are sound credit policies for underwriting new business, while monitoring and reviewing the performance of our existing loan portfolios. We employ various credit risk management and monitoring activities to mitigate risks associated with multiple risk factors affecting loans we hold, could acquire or originate including:

- Loan concentrations and related credit quality
- Counterparty credit risk
- Economic and market conditions
- Legislative or regulatory mandates
- Changes in interest rates
- Merger and acquisition activities
- Reputation risk

Our credit risk management oversight process is governed centrally, but provides for decentralized management and accountability by our lines of business. Our overall credit process includes comprehensive credit policies, disciplined credit underwriting, frequent and detailed risk measurement and modeling, extensive credit training programs, and a continual loan review and audit process.

A key to our credit risk management is adherence to a well-controlled underwriting process, which we believe is appropriate for the needs of our customers as well as investors who purchase the loans or securities collateralized by the loans.

Credit Quality Overview Solid credit quality continued in second quarter 2019, as our net charge-off rate remained low at 0.28% (annualized) of average total loans. Second quarter 2019 results reflected:

- Nonaccrual loans were $5.9 billion at June 30, 2019, down from $6.5 billion at December 31, 2018. Commercial nonaccrual loans increased to $2.5 billion at June 30, 2019, compared with $2.2 billion at December 31, 2018, and consumer nonaccrual loans declined to $3.5 billion at June 30, 2019, compared with $4.3 billion at December 31, 2018. The overall decrease in nonaccrual loans was primarily due to a decrease in consumer nonaccruals from the reclassification of $373 million of real estate 1-4 family first mortgage nonaccrual loans to MLHFS. Nonaccrual loans represented 0.62% of total loans at June 30, 2019, compared with 0.68% at December 31, 2018.
- Net charge-offs (annualized) as a percentage of average total loans were 0.28% and 0.29% in the second quarter and first half of 2019, respectively, compared with 0.26% and 0.29% for the same periods a year ago. Net charge-offs (annualized) as a percentage of our average commercial and consumer portfolios were 0.13% and 0.45% in second quarter 2019 and 0.12% and 0.48% in the first half of 2019, respectively, compared with 0.05% and 0.49% in second quarter 2018 and 0.06% and 0.54% in the first half of 2018.
- Loans that are not government insured/guaranteed and 90 days or more past due and still accruing were $41 million and $739 million in our commercial and consumer portfolios, respectively, at June 30, 2019, compared with $94 million and $885 million at December 31, 2018.
- Our provision for credit losses was $503 million and $1.3 billion in the second quarter and first half of 2019, respectively, compared with $452 million and $643 million for the same periods a year ago. The increase in provision for credit losses in second quarter 2019, compared with the same period a year ago, primarily reflected loan growth. The increase in the first half of 2019, compared with the same period a year ago, was due to an allowance build in first quarter 2019 reflecting a higher probability of slightly less favorable economic conditions, compared with an allowance

release in first quarter 2018 reflecting improvement in our outlook for 2017 hurricane-related losses.
- The allowance for credit losses totaled $10.6 billion, or 1.12% of total loans, at June 30, 2019, down from $10.7 billion, or 1.12%, at December 31, 2018.

Additional information on our loan portfolios and our credit quality trends follows.

PURCHASED CREDIT-IMPAIRED (PCI) LOANS Loans acquired with evidence of credit deterioration since their origination and where it is probable that we will not collect all contractually required principal and interest payments are PCI loans. A nonaccretable difference is established for PCI loans to absorb losses expected on the contractual amounts of those loans. Amounts absorbed by the nonaccretable difference do not affect the income statement or the allowance for credit losses. The carrying value of PCI loans at June 30, 2019, totaled $1.2 billion, compared with $5.0 billion at December 31, 2018. The decline in carrying value was due to the sale of $3.5 billion of Pick-a-Pay PCI loans in the first half of 2019 and paydowns.

For additional information on PCI loans, see the "Risk Management – Credit Risk Management – Real Estate 1-4 Family First and Junior Lien Mortgage Loans – Pick-a-Pay Portfolio" section in this Report, Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K, and Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Significant Loan Portfolio Reviews Measuring and monitoring our credit risk is an ongoing process that tracks delinquencies, collateral values, Fair Isaac Corporation (FICO) scores, economic trends by geographic areas, loan-level risk grading for certain portfolios (typically commercial) and other indications of credit risk. Our credit risk monitoring process is designed to enable early identification of developing risk and to support our determination of an appropriate allowance for credit losses. The following discussion provides additional characteristics and analysis of our significant portfolios. See Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report for more analysis and credit metric information for each of the following portfolios.

COMMERCIAL AND INDUSTRIAL LOANS AND LEASE FINANCING For purposes of portfolio risk management, we aggregate commercial and industrial loans and lease financing according to market segmentation and standard industry codes. We generally subject commercial and industrial loans and lease financing to individual risk assessment using our internal borrower and collateral quality ratings. Our ratings are aligned to regulatory definitions of pass and criticized categories with criticized segmented among special mention, substandard, doubtful and loss categories.

The commercial and industrial loans and lease financing portfolio totaled $368.2 billion, or 39% of total loans, at June 30, 2019. The net charge-off rate (annualized) for this portfolio was 0.18% and 0.17% in the second quarter and first half of 2019, respectively, compared with 0.08% and 0.10% for the same periods a year ago. At June 30, 2019, 0.46% of this portfolio was nonaccruing, compared with 0.43% at December 31, 2018, reflecting an increase of $121 million in nonaccrual loans due to a customer in the utilities industry, as well as increases in the oil, gas and pipelines portfolio, partially offset by improvement across various industry categories. At June 30, 2019, $15.9 billion of commercial and industrial loan and lease financing loans were internally classified as criticized in accordance with regulatory guidance, compared with $15.8 billion at December 31, 2018.

Most of our commercial and industrial loans and lease financing portfolio is secured by short-term assets, such as accounts receivable, inventory and debt securities, as well as long-lived assets, such as equipment and other business assets. Generally, the collateral securing this portfolio represents a secondary source of repayment.

Table 12 provides a breakout of commercial and industrial loans and lease financing by industry, and includes foreign loans of $64.5 billion and $63.7 billion at June 30, 2019, and December 31, 2018, respectively. Significant industry concentrations of foreign loans include $26.9 billion and $25.6 billion in the financials except banks category, $17.0 billion and $18.1 billion in the banks category, and $1.5 billion and $1.2 billion in the oil, gas and pipelines category at June 30, 2019, and December 31, 2018, respectively. The industry categories were updated in 2019, to align with industry groupings that our regulators use to monitor industry concentration risks.

Loans to financials except banks, our largest industry concentration, were $107.3 billion, or 11% of total outstanding loans, at June 30, 2019, compared with $105.9 billion, or 11% of total outstanding loans, at December 31, 2018. These are predominantly loans to investment firms, financial vehicles, and non-bank creditors. A significant portion of this industry category consists of loans to entities that invest in financial assets backed predominantly by commercial or residential real estate or consumer loan assets and are repaid from asset cash flows or the sale of the assets. We limit our loan amounts to a percentage of the value of the underlying assets considering underlying credit risk, asset duration, and ongoing performance.

Oil, gas and pipelines loans were $13.6 billion, or 1% of total outstanding loans, at June 30, 2019, compared with $12.8 billion, or 1% of total outstanding loans, at December 31, 2018. Oil, gas and pipelines nonaccrual loans increased to $636 million at June 30, 2019, compared with $417 million at December 31, 2018, due to weaker portfolio credit performance.

Table 12: Commercial and Industrial Loans and Lease Financing by Industry (1)

	June 30, 2019			December 31, 2018		
(in millions)	**Nonaccrual loans**	**Total portfolio**	**% of total loans**	Nonaccrual loans	Total portfolio	% of total loans
Financials except banks	**$ 160**	**107,292**	**11%**	$ 305	105,925	11%
Technology, telecom and media	**46**	**24,648**	**3**	26	25,681	3
Real estate and construction	**43**	**22,463**	**2**	31	23,380	2
Equipment, machinery and parts manufacturing	**66**	**22,298**	**2**	47	20,850	2
Retail	**88**	**20,351**	**2**	87	19,541	2
Materials and commodities	**94**	**19,599**	**2**	136	18,688	2
Banks	**—**	**17,136**	**2**	—	18,407	2
Automobile related	**23**	**16,673**	**2**	16	16,801	2
Food and beverage manufacturing	**5**	**14,640**	**2**	48	15,448	2
Health care and pharmaceuticals	**24**	**14,555**	**2**	124	15,529	2
Entertainment and recreation	**36**	**13,644**	**1**	33	14,045	1
Oil, gas and pipelines	**636**	**13,562**	**1**	417	12,840	1
Transportation services	**88**	**11,797**	**1**	176	12,029	1
Commercial services	**50**	**10,820**	**1**	48	10,591	1
Agribusiness	**61**	**7,118**	**1**	46	7,996	1
Utilities	**224**	**5,864**	**1**	6	5,756	1
Government and education	**2**	**5,765**	**1**	3	6,160	1
Other (2)	**51**	**19,945**	**2**	27	20,228	2
Total	**$ 1,697**	**368,170**	**39%**	$ 1,576	369,895	39%

(1) Industry categories are based on the North American Industry Classification System and the amounts include foreign loans. The industry categories were updated in 2019 to align with industry groupings that our regulators use to monitor industry concentration risks. The amounts for December 31, 2018, have been reclassified to conform with the current period presentation.
(2) No other single industry had total loans in excess of $5.0 billion and $4.5 billion at June 30, 2019 and December 31, 2018, respectively.

COMMERCIAL REAL ESTATE (CRE) We generally subject CRE loans to individual risk assessment using our internal borrower and collateral quality ratings. Our ratings are aligned to regulatory definitions of pass and criticized categories with criticized segmented among special mention, substandard, doubtful and loss categories. The CRE portfolio, which included $8.1 billion of foreign CRE loans, totaled $144.1 billion, or 15% of total loans, at June 30, 2019, and consisted of $123.0 billion of mortgage loans and $21.1 billion of construction loans.

Table 13 summarizes CRE loans by state and property type with the related nonaccrual totals. The portfolio is diversified both geographically and by property type. The largest geographic concentrations of CRE loans are in California, New York, Florida and Texas, which combined represented 49% of the total CRE portfolio. By property type, the largest concentrations are office buildings at 27% and apartments at 17% of the portfolio. CRE nonaccrual loans totaled 0.5% of the CRE outstanding balance at June 30, 2019, compared with 0.4% at December 31, 2018. At June 30, 2019, we had $4.2 billion of criticized CRE mortgage loans, compared with $4.5 billion at December 31, 2018, and $184 million of criticized CRE construction loans, compared with $289 million at December 31, 2018.

Table 13: CRE Loans by State and Property Type

							June 30, 2019
	Real estate mortgage		Real estate construction		Total		
(in millions)	Nonaccrual loans	Total portfolio	Nonaccrual loans	Total portfolio	Nonaccrual loans	Total portfolio	% of total loans
By state:							
California	$ 142	33,152	9	4,502	151	37,654	4%
New York	23	11,926	2	2,387	25	14,313	2
Florida	19	8,078	3	1,554	22	9,632	1
Texas	56	7,833	4	1,437	60	9,270	1
Arizona	70	4,632	—	312	70	4,944	1
North Carolina	23	3,663	4	904	27	4,567	*
Georgia	14	3,908	—	517	14	4,425	*
Washington	17	3,450	—	599	17	4,049	*
Illinois	176	3,477	—	348	176	3,825	*
Virginia	8	2,749	—	903	8	3,652	*
Other	189	40,140	14	7,604	203	47,744 (1)	5
Total	$ 737	123,008	36	21,067	773	144,075	15%
By property:							
Office buildings	$ 152	36,237	5	2,618	157	38,855	4%
Apartments	13	16,886	—	6,937	13	23,823	3
Industrial/warehouse	80	15,711	2	1,303	82	17,014	2
Retail (excluding shopping center)	98	15,072	10	349	108	15,421	2
Shopping center	83	10,999	—	1,364	83	12,363	1
Hotel/motel	86	9,711	—	1,574	86	11,285	1
Mixed use properties (2)	93	6,705	—	447	93	7,152	1
Institutional	39	3,478	—	1,888	39	5,366	1
Collateral pool	—	2,428	—	7	—	2,435	*
Agriculture	80	2,419	—	7	80	2,426	*
Other	13	3,362	19	4,573	32	7,935	1
Total	$ 737	123,008	36	21,067	773	144,075	15%

* Less than 1%.
(1) Includes 40 states; no state had loans in excess of $3.3 billion.
(2) Mixed use properties are primarily owner occupied real estate, including data centers, flexible space leased to multiple tenants, light manufacturing and other specialized uses.

FOREIGN LOANS AND COUNTRY RISK EXPOSURE We classify loans for financial statement and certain regulatory purposes as foreign primarily based on whether the borrower's primary address is outside of the United States. At June 30, 2019, foreign loans totaled $73.0 billion, representing approximately 8% of our total consolidated loans outstanding, compared with $71.9 billion, or approximately 8% of total consolidated loans outstanding, at December 31, 2018. Foreign loans were approximately 4% of our consolidated total assets at both June 30, 2019 and at December 31, 2018.

Our country risk monitoring process incorporates frequent dialogue with our financial institution customers, counterparties and regulatory agencies, enhanced by centralized monitoring of macroeconomic and capital markets conditions in the respective countries. We establish exposure limits for each country through a centralized oversight process based on customer needs, and in consideration of relevant economic, political, social, legal, and transfer risks. We monitor exposures closely and adjust our country limits in response to changing conditions.

We evaluate our individual country risk exposure based on our assessment of the borrower's ability to repay, which gives consideration for allowable transfers of risk such as guarantees and collateral and may be different from the reporting based on the borrower's primary address. Our largest single foreign country exposure based on our assessment of risk at June 30, 2019, was the United Kingdom, which totaled $27.7 billion, or approximately 1% of our total assets, and included $4.2 billion of sovereign claims. Our United Kingdom sovereign claims arise predominantly from deposits we have placed with the Bank of England pursuant to regulatory requirements in support of our London branch. The United Kingdom officially announced its intention to leave the European Union (Brexit) on March 29, 2017, and the negotiation process leading to its departure has been extended to October 31, 2019. We continue to implement plans for Brexit with our primary goal to continue to serve our existing clients in the United Kingdom and the European Union as well as to continue to meet the needs of our domestic clients as they do business in the United Kingdom and the European Union. We have an existing authorized bank in Ireland and an asset management entity in Luxembourg. We also have obtained regulatory approval to establish a broker dealer in France. We plan to leverage these entities in order to continue to serve clients in the European Union. In addition, we are implementing actions where possible to mitigate the impact of Brexit on our supplier contracts, staffing and business operations in the European Union. For additional information on risks associated with Brexit, see the "Risk Factors" section in our 2018 Form 10-K.

Table 14 provides information regarding our top 20 exposures by country (excluding the U.S.) and our Eurozone exposure, based on our assessment of risk, which gives consideration to the country of any guarantors and/or underlying collateral. With respect to Table 14:

- Lending exposure includes outstanding loans, unfunded credit commitments, and deposits with foreign banks. These balances are presented prior to the deduction of allowance for credit losses or collateral received under the terms of the credit agreements, if any.
- Securities exposure represents debt and equity securities of foreign issuers. Long and short positions are netted, and net short positions are reflected as negative exposure.
- Derivatives and other exposure represents foreign exchange contracts, derivative contracts, securities resale agreements, and securities lending agreements. This exposure is presented net of counterparty netting adjustments and reduced by the amount of cash collateral, if any. It includes credit default swaps (CDS) predominantly used for market making activities in the U.S.-based trading businesses, which sometimes results in selling and purchasing protection on the identical reference entities. Generally, we do not use market instruments such as CDS to hedge the credit risk of our investments or loan positions, although we do use them to manage risk in our trading businesses. At June 30, 2019, the gross notional amount of our CDS sold that reference assets in the Top 20 or Eurozone countries that contain non-sovereign debt was $280 million, which was offset by the notional amount of CDS purchased of $472 million. At June 30, 2019, the gross notional amount of our CDS sold that reference assets in the Top 20 or Eurozone countries that contain sovereign debt was $410 million, which was offset by the notional amount of CDS purchased of $390 million.

Table 14: Select Country Exposures

	June 30, 2019								
	Lending		Securities		Derivatives and other		Total exposure		
(in millions)	Sovereign	Non-sovereign	Sovereign	Non-sovereign	Sovereign	Non-sovereign	Sovereign	Non-sovereign (1)	Total
Top 20 country exposures:									
United Kingdom	$ 4,193	21,727	—	1,552	—	266	4,193	23,545	27,738
Canada	32	17,696	42	258	—	112	74	18,066	18,140
Cayman Islands	—	6,598	—	43	—	134	—	6,775	6,775
Ireland	62	4,464	—	143	—	163	62	4,770	4,832
Bermuda	—	3,634	—	115	—	73	—	3,822	3,822
Netherlands	—	2,744	95	337	—	32	95	3,113	3,208
Luxembourg	—	2,473	—	583	—	32	—	3,088	3,088
Germany	—	2,304	19	228	—	305	19	2,837	2,856
China	—	2,345	15	339	15	25	30	2,709	2,739
Guernsey	—	2,704	—	—	—	1	—	2,705	2,705
France	—	1,999	—	67	39	1	39	2,067	2,106
Australia	—	1,913	—	51	—	1	—	1,965	1,965
India	—	1,824	—	66	—	—	—	1,890	1,890
Chile	1	1,734	—	(1)	—	103	1	1,836	1,837
Brazil	—	1,772	—	2	5	—	5	1,774	1,779
South Korea	—	1,364	1	60	—	7	1	1,431	1,432
Virgin Islands (British)	—	1,276	—	45	—	—	—	1,321	1,321
Japan	311	1,042	3	(49)	—	8	314	1,001	1,315
United Arab Emirates	—	1,262	—	2	—	—	—	1,264	1,264
Mexico	—	1,156	—	7	—	1	—	1,164	1,164
Total top 20 country exposures	$ 4,599	82,031	175	3,848	59	1,264	4,833	87,143	91,976
Eurozone exposure:									
Eurozone countries included in Top 20 above (2)	$ 62	13,984	114	1,358	39	533	215	15,875	16,090
Belgium	—	545	—	(66)	—	2	—	481	481
Spain	—	405	—	25	—	1	—	431	431
Austria	—	265	—	(2)	—	—	—	263	263
Other Eurozone exposure (3)	—	218	—	88	—	—	—	306	306
Total Eurozone exposure	$ 62	15,417	114	1,403	39	536	215	17,356	17,571

(1) For countries presented in the table, total non-sovereign exposure comprises $44.4 billion exposure to financial institutions and $44.2 billion to non-financial corporations at June 30, 2019.
(2) Consists of exposure to Ireland, Netherlands, Luxembourg, Germany and France included in Top 20.
(3) Includes non-sovereign exposure to Italy, Portugal, and Greece in the amount of $135 million, $19 million and $3 million, respectively. We had no sovereign exposure in these countries at June 30, 2019.

REAL ESTATE 1-4 FAMILY FIRST AND JUNIOR LIEN MORTGAGE LOANS Our real estate 1-4 family first and junior lien mortgage loans are presented in Table 15.

Table 15: Real Estate 1-4 Family First and Junior Lien Mortgage Loans

	June 30, 2019		December 31, 2018	
(in millions)	**Balance**	**% of portfolio**	Balance	% of portfolio
Real estate 1-4 family first mortgage	**$ 286,427**	**90%**	$ 285,065	89%
Real estate 1-4 family junior lien mortgage	**32,068**	**10**	34,398	11
Total real estate 1-4 family mortgage loans	**$ 318,495**	**100%**	$ 319,463	100%

The real estate 1-4 family mortgage loan portfolio includes some loans with adjustable-rate features and some with an interest-only feature as part of the loan terms. Interest-only loans were approximately 3% and 4% of total loans at June 30, 2019, and December 31, 2018, respectively. We believe we have manageable adjustable-rate mortgage (ARM) reset risk across our owned mortgage loan portfolios. We do not offer option ARM products, nor do we offer variable-rate mortgage products with fixed payment amounts, commonly referred to within the financial services industry as negative amortizing mortgage loans. The option ARMs we do have are included in the Pick-a-Pay portfolio which was acquired from Wachovia. For more information, see the "Risk Management – Credit Risk Management – Real Estate 1-4 Family First and Junior Lien Mortgage Loans – Pick-a-Pay Portfolio" section in this Report.

We continue to modify real estate 1-4 family mortgage loans to assist homeowners and other borrowers experiencing financial difficulties. For more information on our modification programs, see the "Risk Management – Credit Risk Management – Real Estate 1-4 Family First and Junior Lien Mortgage Loans" section in our 2018 Form 10-K.

Part of our credit monitoring includes tracking delinquency, current FICO scores and loan/combined loan to collateral values (LTV/CLTV) on the entire real estate 1-4 family mortgage loan portfolio. These credit risk indicators, which exclude government insured/guaranteed loans, continued to improve in second quarter 2019 on the non-PCI mortgage portfolio. Loans 30 days or more delinquent at June 30, 2019, totaled $3.4 billion, or 1% of total non-PCI mortgages, compared with $4.0 billion, or 1%, at December 31, 2018. Loans with FICO scores lower than 640 totaled $8.3 billion, or 3% of total non-PCI mortgages at June 30, 2019, compared with $9.7 billion, or 3%, at December 31, 2018. Mortgages with a LTV/CLTV greater than 100% totaled $3.3 billion at June 30, 2019, or 1% of total non-PCI mortgages, compared with $3.9 billion, or 1%, at December 31, 2018. Information regarding credit quality indicators can be found in Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Real estate 1-4 family first and junior lien mortgage loans by state are presented in Table 16. Our real estate 1-4 family non-PCI mortgage loans to borrowers in California represented 13% of total loans at June 30, 2019, located predominantly within the larger metropolitan areas, with no single California metropolitan area consisting of more than 5% of total loans. We monitor changes in real estate values and underlying economic or market conditions for all geographic areas of our real estate 1-4 family first and junior lien mortgage portfolios as part of our credit risk management process. Our underwriting and periodic review of loans and lines secured by residential real estate collateral includes appraisals or estimates from automated valuation models (AVMs) to support property values. Additional information about AVMs and our policy for their use can be found in Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report and the "Risk Management – Credit Risk Management – Real Estate 1-4 Family First and Junior Lien Mortgage Loans" section in our 2018 Form 10-K.

Table 16: Real Estate 1-4 Family First and Junior Lien Mortgage Loans by State

	June 30, 2019			
(in millions)	Real estate 1-4 family first mortgage	Real estate 1-4 family junior lien mortgage	Total real estate 1-4 family mortgage	% of total loans
Real estate 1-4 family loans (excluding PCI):				
California	$ 113,523	8,812	122,335	13%
New York	30,032	1,612	31,644	3
New Jersey	13,923	2,955	16,878	2
Florida	11,943	2,853	14,796	2
Washington	10,380	719	11,099	1
Virginia	8,627	1,858	10,485	1
Texas	8,746	626	9,372	1
North Carolina	5,883	1,484	7,367	1
Pennsylvania	5,341	1,792	7,133	1
Other (1)	65,496	9,342	74,838	8
Government insured/ guaranteed loans (2)	11,374	—	11,374	1
Real estate 1-4 family loans (excluding PCI)	285,268	32,053	317,321	34
Real estate 1-4 family PCI loans	1,159	15	1,174	—
Total	$ 286,427	32,068	318,495	34%

(1) Consists of 41 states; no state had loans in excess of $7.0 billion.
(2) Represents loans whose repayments are predominantly insured by the Federal Housing Administration (FHA) or guaranteed by the Department of Veterans Affairs (VA).

First Lien Mortgage Portfolio Our total real estate 1-4 family first lien mortgage portfolio increased $1.9 billion and $1.4 billion in the second quarter and first half of 2019, respectively. The increase was the result of retaining mortgage loan originations of $19.8 billion and $30.4 billion in the second quarter and first half of 2019, respectively, partially offset by paydowns, $1.6 billion and $3.5 billion of sales of Pick-a-Pay PCI loans in the second quarter and first half of 2019, respectively, and the reclassification in second quarter 2019 of $1.8 billion of mortgage loans to MLHFS. In addition, nonconforming mortgage loan originations of $658 million in second quarter 2019 and $1.4 billion in the first half of 2019 that would have otherwise been included in this portfolio were designated as MLHFS in anticipation of the future issuance of residential mortgage-backed securities.

The credit performance associated with our real estate 1-4 family first lien mortgage portfolio improved in second quarter 2019, as measured through net charge-offs and nonaccrual loans. Net charge-offs (annualized) as a percentage of average real estate 1-4 family first lien mortgage loans was a net recovery of 0.04% and 0.03% in the second quarter and first half of 2019, respectively, compared with a net recovery of 0.03% for both the same periods a year ago. Nonaccrual loans were $2.4 billion at June 30, 2019, down $758 million from December 31, 2018. The decrease in nonaccrual loans from December 31, 2018, was driven by the reclassification of nonaccrual loans to MLHFS in anticipation of future sales, nonaccrual loan sales, and a reduction in inflows due to credit stabilization.

Table 17 shows certain delinquency and loss information for the first lien mortgage portfolio and lists the top five states by outstanding balance.

Table 17: First Lien Mortgage Portfolio Performance

	Outstanding balance		% of loans 30 days or more past due		Loss (recovery) rate (annualized) quarter ended				
(in millions)	**Jun 30, 2019**	Dec 31, 2018	**Jun 30, 2019**	Dec 31, 2018	**Jun 30, 2019**	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
California	$ **113,523**	109,092	**0.55%**	0.68	**(0.04)**	(0.03)	(0.04)	(0.05)	(0.07)
New York	**30,032**	28,954	**1.00**	1.12	**—**	0.02	0.02	0.04	0.09
New Jersey	**13,923**	13,811	**1.60**	1.91	**(0.06)**	0.08	0.05	(0.02)	0.02
Florida	**11,943**	12,350	**2.22**	2.58	**(0.11)**	(0.10)	(0.18)	(0.22)	(0.15)
Washington	**10,380**	9,677	**0.42**	0.57	**(0.03)**	(0.04)	(0.06)	(0.06)	(0.06)
Other	**94,093**	93,261	**1.40**	1.70	**(0.06)**	(0.02)	(0.03)	(0.03)	(0.03)
Total	**273,894**	267,145	**1.01**	1.23	**(0.04)**	(0.02)	(0.03)	(0.04)	(0.04)
Government insured/guaranteed loans	**11,374**	12,932							
PCI	**1,159**	4,988							
Total first lien mortgages	$ **286,427**	285,065							

Pick-a-Pay Portfolio The Pick-a-Pay portfolio was one of the consumer residential first lien mortgage portfolios we acquired from Wachovia and a majority of the portfolio was identified as PCI loans.

The Pick-a-Pay portfolio is included in the consumer real estate 1-4 family first mortgage class of loans throughout this Report. Pick-a-Pay option payment loans may have fixed or adjustable rates with payment options that include a minimum payment, an interest-only payment or fully amortizing payment (both 15 and 30 year options). Table 18 provides balances by types of loans as of June 30, 2019.

Table 18: Pick-a-Pay Portfolio

	June 30, 2019		December 31, 2018	
(in millions)	**Adjusted unpaid principal balance (1)**	**% of total**	Adjusted unpaid principal balance (1)	% of total
Option payment loans	**$ 5,618**	**52%**	$ 8,813	50%
Non-option payment adjustable-rate and fixed-rate loans	**2,433**	**22**	2,848	16
Full-term loan modifications	**2,783**	**26**	6,080	34
Total adjusted unpaid principal balance	**$ 10,834**	**100%**	$ 17,741	100%
Total carrying value	**$ 10,512**		16,115	

(1) Adjusted unpaid principal balance includes write-downs taken on loans where severe delinquency (normally 180 days) or other indications of severe borrower financial stress exist that indicate there will be a loss of contractually due amounts upon final resolution of the loan.

The predominant portion of our remaining PCI loans is included in the Pick-a-Pay portfolio. Total carrying value of Pick-a-Pay PCI loans was $1.1 billion at June 30, 2019, compared with $4.9 billion at December 31, 2018. During second quarter 2019, we sold $1.9 billion of Pick-a-Pay PCI loans that resulted in a gain of $721 million. We also expect to close on the sale of approximately $500 million of Pick-a-Pay PCI loans in third quarter 2019. The accretable yield balance of our Pick-a-Pay PCI loan portfolio was $411 million ($594 million for all PCI loans) at June 30, 2019, compared with $2.8 billion ($3.0 billion for all PCI loans) at December 31, 2018. The estimated weighted-average life was approximately 5.2 years and 5.5 years at June 30, 2019 and December 31, 2018, respectively. The accretable yield percentage for Pick-a-Pay PCI loans for second quarter 2019 was 11.56%, and we expect the percentage to increase to approximately 12.24% for third quarter 2019.

For additional information on PCI loans, see Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K.

Junior Lien Mortgage Portfolio The junior lien mortgage portfolio consists of residential mortgage lines and loans that are subordinate in rights to an existing lien on the same property. It is not unusual for these lines and loans to have draw periods, interest only payments, balloon payments, adjustable rates and similar features. Junior lien loan products are mostly amortizing payment loans with fixed interest rates and repayment periods between five to 30 years.

We continuously monitor the credit performance of our junior lien mortgage portfolio for trends and factors that influence the frequency and severity of loss. We have observed that the severity of loss for junior lien mortgages is high and generally not affected by whether we or a third party own or service the related first lien mortgage, but the frequency of delinquency is typically lower when we own or service the first lien mortgage. In general, we have limited information available on the delinquency status of the third party owned or serviced first lien where we also hold a junior lien. To capture this inherent loss content, our allowance process for junior lien mortgages considers the relative difference in loss experience for junior lien mortgages behind first lien mortgage loans we own or service, compared with those behind first lien mortgage loans owned or serviced by third parties. In addition, our allowance process for junior lien mortgages considers the inherent loss where the borrower is delinquent on the corresponding first lien mortgage loans.

Table 19 shows certain delinquency and loss information for the junior lien mortgage portfolio and lists the top five states by outstanding balance. The decrease in outstanding balances since December 31, 2018, predominantly reflects loan paydowns. As of June 30, 2019, 6% of the outstanding balance of the junior lien mortgage portfolio was associated with loans that had a combined loan to value (CLTV) ratio in excess of 100%. Of those junior lien mortgages with a CLTV ratio in excess of 100%, 3% were 30 days or more past due. CLTV means the ratio of the total loan balance of first lien mortgages and junior lien mortgages (including unused line amounts for credit line products) to property collateral value. The unsecured portion (the outstanding amount that was in excess of the most recent property collateral value) of the outstanding balances of these loans totaled 2% of the junior lien mortgage portfolio at June 30, 2019. For additional information on consumer loans by LTV/CLTV, see Table 6.12 in Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Table 19: Junior Lien Mortgage Portfolio Performance

	Outstanding balance		% of loans 30 days or more past due		Loss (recovery) rate (annualized) quarter ended				
(in millions)	**Jun 30, 2019**	Dec 31, 2018	**Jun 30, 2019**	Dec 31, 2018	**Jun 30, 2019**	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
California	$ **8,812**	9,338	**1.64%**	1.67	**(0.40)**	(0.39)	(0.33)	(0.51)	(0.56)
New Jersey	**2,955**	3,152	**2.77**	2.57	**(0.07)**	0.12	0.03	0.24	0.28
Florida	**2,853**	3,140	**2.82**	2.73	**(0.11)**	(0.05)	0.07	0.12	(0.05)
Virginia	**1,858**	2,020	**2.03**	1.91	**(0.17)**	0.14	0.04	0.16	0.30
Pennsylvania	**1,792**	1,929	**2.19**	2.10	**(0.19)**	0.04	0.25	0.18	0.13
Other	**13,783**	14,802	**1.99**	2.12	**(0.22)**	(0.03)	(0.11)	(0.05)	(0.06)
Total	**32,053**	34,381	**2.05**	2.08	**(0.24)**	(0.10)	(0.11)	(0.10)	(0.13)
PCI	**15**	17							
Total junior lien mortgages	$ **32,068**	34,398							

Our junior lien, as well as first lien, lines of credit portfolios generally have draw periods of 10, 15 or 20 years with variable interest rate and payment options available during the draw period of (1) interest only or (2) 1.5% of outstanding principal balance plus accrued interest. As of June 30, 2019, lines of credit in a draw period primarily used the interest-only option. During the draw period, the borrower has the option of converting all or a portion of the line from a variable interest rate to a fixed rate with terms including interest-only payments for a fixed period between three to seven years or a fully amortizing payment with a fixed period between five to 30 years. At the end of the draw period, a line of credit generally converts to an amortizing payment schedule with repayment terms of up to 30 years based on the balance at time of conversion. Certain lines and loans have been structured with a balloon payment, which requires full repayment of the outstanding balance at the end of the term period. The conversion of lines or loans to fully amortizing or balloon payoff may result in a significant payment increase, which can affect some borrowers' ability to repay the outstanding balance.

On a monthly basis, we monitor the payment characteristics of borrowers in our first and junior lien lines of credit portfolios. In June 2019, approximately 46% of these borrowers paid only the minimum amount due and approximately 49% paid more than the minimum amount due. The rest were either delinquent or paid less than the minimum amount due. For the borrowers with an interest only payment feature, approximately 31% paid only the minimum amount due and approximately 63% paid more than the minimum amount due.

The lines that enter their amortization period may experience higher delinquencies and higher loss rates than the ones in their draw or term period. We have considered this increased inherent risk in our allowance for credit loss estimate.

In anticipation of our borrowers reaching the end of their contractual commitment, we have created a program to inform, educate and help these borrowers transition from interest-only to fully-amortizing payments or full repayment. We monitor the performance of the borrowers moving through the program in an effort to refine our ongoing program strategy.

Table 20 reflects the outstanding balance of our portfolio of junior lien mortgages, including lines and loans, and first lien lines segregated into scheduled end of draw or end of term periods and products that are currently amortizing, or in balloon repayment status. It excludes real estate 1-4 family first lien line reverse mortgages, which total $94 million, because they are predominantly insured by the FHA, and it excludes PCI loans, which total $30 million, because their losses were generally reflected in our nonaccretable difference established at the date of acquisition. At June 30, 2019, $531 million, or 2%, of lines in their draw period were 30 days or more past due, compared with $431 million, or 4%, of amortizing lines of credit. Included in the amortizing amounts in Table 20 is $51 million of end-of-term balloon payments which were past due. The unfunded credit commitments for junior and first lien lines totaled $59.6 billion at June 30, 2019.

Table 20: Junior Lien Mortgage Line and Loan and First Lien Mortgage Line Portfolios Payment Schedule

			Scheduled end of draw / term						
(in millions)		Outstanding balance June 30, 2019	Remainder of 2019	2020	2021	2022	2023	2024 and thereafter (1)	Amortizing
Junior lien lines and loans	$	32,053	165	405	984	3,636	2,501	14,043	10,319
First lien lines		11,059	58	164	460	1,749	1,307	5,437	1,884
Total	$	43,112	223	569	1,444	5,385	3,808	19,480	12,203
% of portfolios		100%	1	1	3	12	9	45	29
End-of-term balloon payments included in Total	$	764	75	185	322	153	6	23	

(1) Substantially all lines and loans are scheduled to convert to amortizing loans by the end of 2028, with annual scheduled amounts through 2028 ranging from $2.1 billion to $5.3 billion and averaging $3.6 billion per year.

CREDIT CARDS Our credit card portfolio totaled $38.8 billion at June 30, 2019, which represented 4% of our total outstanding loans. The net charge-off rate (annualized) for our credit card portfolio was 3.68% for second quarter 2019, compared with 3.61% for second quarter 2018 and 3.71% and 3.65% for the first half of 2019 and 2018, respectively.

AUTOMOBILE Our automobile portfolio, predominantly composed of indirect loans, totaled $45.7 billion at June 30, 2019. The net charge-off rate (annualized) for our automobile portfolio was 0.46% for second quarter 2019, compared with 0.93% for second quarter 2018 and 0.64% and 1.30% for the first half of 2019 and 2018, respectively. The decreases in the net charge-off rate in the second quarter and first half of 2019, compared with the same periods in 2018, were driven by lower losses on higher quality originations.

OTHER REVOLVING CREDIT AND INSTALLMENT Other revolving credit and installment loans totaled $34.7 billion at June 30, 2019, and primarily included student and securities-based loans. Our private student loan portfolio totaled $10.9 billion at June 30, 2019. The net charge-off rate (annualized) for other revolving credit and installment loans was 1.56% for second quarter 2019, compared with 1.44% for second quarter 2018 and 1.52% for both the first half of 2019 and 2018.

NONPERFORMING ASSETS (NONACCRUAL LOANS AND FORECLOSED ASSETS) Table 21 summarizes nonperforming assets (NPAs) for each of the last four quarters. Total NPAs decreased $1.0 billion from first quarter 2019 to $6.3 billion. Nonaccrual loans decreased $983 million from first quarter 2019 to $5.9 billion, due to a decline in consumer nonaccruals from the reclassification of $373 million in real estate 1-4 family first mortgage nonaccrual loans to MLHFS, as well as other broad-based improvement across several commercial industry categories. Foreclosed assets of $377 million were down $59 million from first quarter 2019. For information about when we generally place loans on nonaccrual status, see Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K. Credit card loans are not placed on nonaccrual status, but are generally fully charged off when the loan reaches 180 days past due. For additional information on impaired loans, see Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Table 21: Nonperforming Assets (Nonaccrual Loans and Foreclosed Assets)

	June 30, 2019		March 31, 2019		December 31, 2018		September 30, 2018	
($ in millions)	**Balance**	**% of total loans**	Balance	% of total loans	Balance	% of total loans	Balance	% of total loans
Nonaccrual loans:								
Commercial:								
Commercial and industrial	**$ 1,634**	**0.47%**	$ 1,986	0.57%	$ 1,486	0.42%	$ 1,555	0.46%
Real estate mortgage	**737**	**0.60**	699	0.57	580	0.48	603	0.50
Real estate construction	**36**	**0.17**	36	0.16	32	0.14	44	0.19
Lease financing	**63**	**0.33**	76	0.40	90	0.46	96	0.49
Total commercial	**2,470**	**0.48**	2,797	0.55	2,188	0.43	2,298	0.46
Consumer:								
Real estate 1-4 family first mortgage	**2,425**	**0.85**	3,026	1.06	3,183	1.12	3,267	1.15
Real estate 1-4 family junior lien mortgage	**868**	**2.71**	916	2.77	945	2.75	983	2.78
Automobile	**115**	**0.25**	116	0.26	130	0.29	118	0.26
Other revolving credit and installment	**44**	**0.13**	50	0.14	50	0.14	48	0.13
Total consumer	**3,452**	**0.79**	4,108	0.94	4,308	0.98	4,416	1.00
Total nonaccrual loans (1)(2)	**5,922**	**0.62**	6,905	0.73	6,496	0.68	6,714	0.71
Foreclosed assets:								
Government insured/guaranteed (3)	**68**		75		88		87	
Non-government insured/guaranteed	**309**		361		363		435	
Total foreclosed assets	**377**		436		451		522	
Total nonperforming assets	**$ 6,299**	**0.66%**	$ 7,341	0.77%	$ 6,947	0.73%	$ 7,236	0.77%
Change in NPAs from prior quarter	**$ (1,042)**		394		(289)		(389)	

(1) Excludes PCI loans because they continue to earn interest income from accretable yield, independent of performance in accordance with their contractual terms.
(2) Real estate 1-4 family mortgage loans predominantly insured by the FHA or guaranteed by the VA are not placed on nonaccrual status because they are insured or guaranteed.
(3) Consistent with regulatory reporting requirements, foreclosed real estate resulting from government insured/guaranteed loans are classified as nonperforming. Both principal and interest related to these foreclosed real estate assets are collectible because the loans were predominantly insured by the FHA or guaranteed by the VA. Foreclosure of certain government guaranteed residential real estate mortgage loans are excluded from this table and included in Accounts Receivable in Other Assets. For more information on foreclosed assets, see Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K.

Table 22 provides an analysis of the changes in nonaccrual loans.

Table 22: Analysis of Changes in Nonaccrual Loans

					Quarter ended
(in millions)	**Jun 30, 2019**	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
Commercial nonaccrual loans					
Balance, beginning of period	$ **2,797**	2,188	2,298	2,455	2,409
Inflows	**621**	1,238	662	774	726
Outflows:					
Returned to accruing	**(46)**	(43)	(45)	(122)	(43)
Foreclosures	**(2)**	(15)	(12)	—	—
Charge-offs	**(187)**	(158)	(193)	(191)	(133)
Payments, sales and other	**(713)**	(413)	(522)	(618)	(504)
Total outflows	**(948)**	(629)	(772)	(931)	(680)
Balance, end of period	**2,470**	2,797	2,188	2,298	2,455
Consumer nonaccrual loans					
Balance, beginning of period	**4,108**	4,308	4,416	4,671	4,930
Inflows	**437**	552	569	572	578
Outflows:					
Returned to accruing	**(250)**	(248)	(269)	(319)	(342)
Foreclosures	**(34)**	(42)	(35)	(41)	(40)
Charge-offs	**(34)**	(49)	(57)	(65)	(84)
Payments, sales and other	**(775)**	(413)	(316)	(402)	(371)
Total outflows	**(1,093)**	(752)	(677)	(827)	(837)
Balance, end of period	**3,452**	4,108	4,308	4,416	4,671
Total nonaccrual loans	$ **5,922**	6,905	6,496	6,714	7,126

Typically, changes to nonaccrual loans period-over-period represent inflows for loans that are placed on nonaccrual status in accordance with our policy, offset by reductions for loans that are paid down, charged off, sold, foreclosed, or are no longer classified as nonaccrual as a result of continued performance and an improvement in the borrower's financial condition and loan repayment capabilities.

While nonaccrual loans are not free of loss content, we believe exposure to loss is significantly mitigated by the following factors at June 30, 2019:

- 85% of total commercial nonaccrual loans and 99% of total consumer nonaccrual loans are secured. Of the consumer nonaccrual loans, 95% are secured by real estate and 87% have a combined LTV (CLTV) ratio of 80% or less.
- losses of $284 million and $1.1 billion have already been recognized on 15% of commercial nonaccrual loans and 38% of consumer nonaccrual loans, respectively, in accordance with our charge-off policies. Once we write down loans to the net realizable value (fair value of collateral less estimated costs to sell), we re-evaluate each loan regularly and record additional write-downs if needed.
- 70% of commercial nonaccrual loans were current on interest and 54% were current on both principal and interest, but were on nonaccrual status because the full or timely collection of interest or principal had become uncertain.
- of the $1.5 billion of consumer loans in bankruptcy or discharged in bankruptcy, and classified as nonaccrual, $1.0 billion were current.
- the remaining risk of loss of all nonaccrual loans has been considered and we believe is adequately covered by the allowance for loan losses.

We continue to work with our customers experiencing financial difficulty to determine if they can qualify for a loan modification so that they can stay in their homes. Under our proprietary modification programs, customers may be required to provide updated documentation, and some programs require completion of payment during trial periods to demonstrate sustained performance before the loan can be removed from nonaccrual status.

Table 23 provides a summary of foreclosed assets and an analysis of changes in foreclosed assets.

Table 23: Foreclosed Assets

(in millions)		Jun 30, 2019	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
Summary by loan segment						
Government insured/guaranteed	$	**68**	75	88	87	90
Commercial		**101**	124	127	201	176
Consumer		**208**	237	236	234	233
Total foreclosed assets	$	**377**	436	451	522	499
Analysis of changes in foreclosed assets						
Balance, beginning of period	$	**436**	451	522	499	571
Net change in government insured/guaranteed (1)		**(7)**	(13)	1	(3)	(13)
Additions to foreclosed assets (2)		**144**	193	193	209	191
Reductions:						
Sales		**(199)**	(205)	(274)	(181)	(257)
Write-downs and gains (losses) on sales		**3**	10	9	(2)	7
Total reductions		**(196)**	(195)	(265)	(183)	(250)
Balance, end of period	$	**377**	436	451	522	499

(1) Foreclosed government insured/guaranteed loans are temporarily transferred to and held by us as servicer, until reimbursement is received from FHA or VA.
(2) Includes loans moved into foreclosed assets from nonaccrual status, PCI loans transitioned directly to foreclosed assets and repossessed automobiles.

Foreclosed assets at June 30, 2019, included $253 million of foreclosed residential real estate, of which 27% is predominantly FHA insured or VA guaranteed and expected to have minimal or no loss content. The remaining amount of foreclosed assets has been written down to estimated net realizable value. Of the $377 million in foreclosed assets at June 30, 2019, 67% have been in the foreclosed assets portfolio one year or less.

TROUBLED DEBT RESTRUCTURINGS (TDRs)

Table 24: Troubled Debt Restructurings (TDRs)

(in millions)		Jun 30, 2019	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
Commercial:						
Commercial and industrial	$	**1,294**	1,740	1,623	1,837	1,792
Real estate mortgage		**620**	681	704	782	904
Real estate construction		**43**	45	39	49	40
Lease financing		**31**	46	56	65	50
Total commercial TDRs		**1,988**	2,512	2,422	2,733	2,786
Consumer:						
Real estate 1-4 family first mortgage		**8,218**	10,343	10,629	10,967	11,387
Real estate 1-4 family junior lien mortgage		**1,550**	1,604	1,639	1,689	1,735
Credit Card		**486**	473	449	431	410
Automobile		**85**	85	89	91	81
Other revolving credit and installment		**159**	156	154	146	141
Trial modifications		**127**	136	149	163	200
Total consumer TDRs		**10,625**	12,797	13,109	13,487	13,954
Total TDRs	$	**12,613**	15,309	15,531	16,220	16,740
TDRs on nonaccrual status	$	**3,058**	4,037	4,058	4,298	4,454
TDRs on accrual status:						
Government insured/guaranteed		**1,209**	1,275	1,299	1,308	1,368
Non-government insured/guaranteed		**8,346**	9,997	10,174	10,614	10,918
Total TDRs	$	**12,613**	15,309	15,531	16,220	16,740

Table 24 provides information regarding the recorded investment of loans modified in TDRs. The allowance for loan losses for TDRs was $1.1 billion and $1.2 billion at June 30, 2019, and December 31, 2018, respectively. See Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report for additional information regarding TDRs. In those situations where principal is forgiven, the entire amount of such forgiveness is immediately charged off. When we delay the timing on the repayment of a portion of principal (principal forbearance), we charge off the amount of forbearance if that amount is not considered fully collectible.

For more information on our nonaccrual policies when a restructuring is involved, see the “Risk Management – Credit Risk Management – Troubled Debt Restructurings (TDRs)” section in our 2018 Form 10-K.

Table 25 provides an analysis of the changes in TDRs. Loans modified more than once are reported as TDR inflows only in the period they are first modified. Other than resolutions such as foreclosures, sales and transfers to held for sale, we may remove loans held for investment from TDR classification, but only if they have been refinanced or restructured at market terms and qualify as new loans.

TDRs of $12.6 billion at June 30, 2019, decreased $2.7 billion from first quarter 2019 primarily due to a decline in consumer TDRs from the reclassification of $1.7 billion in real estate 1-4 family first mortgage TDR loans to MLHFS, as well as paydowns.

Table 25: Analysis of Changes in TDRs

(in millions)		Jun 30, 2019	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
		Quarter ended				
Commercial TDRs						
Balance, beginning of quarter	$	**2,512**	2,422	2,733	2,786	2,740
Inflows (1)(2)		**232**	539	374	588	481
Outflows						
Charge-offs		**(37)**	(44)	(88)	(92)	(41)
Foreclosures		**—**	—	(2)	(13)	—
Payments, sales and other (2)(3)		**(719)**	(405)	(595)	(536)	(394)
Balance, end of quarter		**1,988**	2,512	2,422	2,733	2,786
Consumer TDRs						
Balance, beginning of quarter		**12,797**	13,109	13,487	13,954	14,380
Inflows (1)		**336**	439	379	414	467
Outflows						
Charge-offs		**(61)**	(60)	(57)	(56)	(56)
Foreclosures		**(74)**	(86)	(90)	(116)	(133)
Payments, sales and other (3)		**(2,364)**	(593)	(595)	(672)	(706)
Net change in trial modifications (4)		**(9)**	(12)	(15)	(37)	2
Balance, end of quarter		**10,625**	12,797	13,109	13,487	13,954
Total TDRs	$	**12,613**	15,309	15,531	16,220	16,740

(1) Inflows include loans that modify, even if they resolve within the period, as well as gross advances on term loans that modified in a prior period and net advances on revolving commercial TDRs that modified in a prior period.
(2) Information for the quarter ended June 30, 2018 has been revised to offset payments and advances (i.e. inflows) on revolving commercial TDRs, for consistent presentation of this activity for all periods.
(3) Other outflows consist of normal amortization/accretion of loan basis adjustments and loans transferred to held-for-sale. Occasionally, loans that have been refinanced or restructured at market terms qualify as new loans, which are also included as other outflows.
(4) Net change in trial modifications includes: inflows of new TDRs entering the trial payment period, net of outflows for modifications that either (i) successfully perform and enter into a permanent modification, or (ii) did not successfully perform according to the terms of the trial period plan and are subsequently charged-off, foreclosed upon or otherwise resolved.

LOANS 90 DAYS OR MORE PAST DUE AND STILL ACCRUING Loans 90 days or more past due as to interest or principal are still accruing if they are (1) well-secured and in the process of collection or (2) real estate 1-4 family mortgage loans or consumer loans exempt under regulatory rules from being classified as nonaccrual until later delinquency, usually 120 days past due. PCI loans are not included in past due and still accruing loans even when they are 90 days or more contractually past due. These PCI loans are considered to be accruing because they continue to earn interest from accretable yield, independent of performance in accordance with their contractual terms.

Excluding insured/guaranteed loans, loans 90 days or more past due and still accruing at June 30, 2019, were down $199 million, or 20%, from December 31, 2018, due to payoffs, other loss mitigation activities, and credit stabilization. Also, fluctuations from quarter to quarter are influenced by seasonality.

Loans 90 days or more past due and still accruing whose repayments are predominantly insured by the FHA or guaranteed by the VA for mortgages were $6.5 billion at June 30, 2019, down from $7.7 billion at December 31, 2018, due to an improvement in delinquencies as well as a reduction in the portfolio.

Table 26 reflects non-PCI loans 90 days or more past due and still accruing by class for loans not government insured/guaranteed. For additional information on delinquencies by loan class, see Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Table 26: Loans 90 Days or More Past Due and Still Accruing

(in millions)		Jun 30, 2019	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
Total (excluding PCI (1)):	$	**7,258**	7,870	8,704	8,838	9,087
Less: FHA insured/VA guaranteed (2)		**6,478**	6,996	7,725	7,906	8,246
Total, not government insured/guaranteed	$	**780**	874	979	932	841
By segment and class, not government insured/guaranteed:						
Commercial:						
Commercial and industrial	$	**17**	42	43	42	23
Real estate mortgage		**24**	20	51	56	26
Real estate construction		**—**	5	—	—	—
Total commercial		**41**	67	94	98	49
Consumer:						
Real estate 1-4 family first mortgage		**108**	117	124	128	132
Real estate 1-4 family junior lien mortgage		**27**	28	32	32	33
Credit card		**449**	502	513	460	429
Automobile		**63**	68	114	108	105
Other revolving credit and installment		**92**	92	102	106	93
Total consumer		**739**	807	885	834	792
Total, not government insured/guaranteed	$	**780**	874	979	932	841

(1) PCI loans totaled $156 million, $243 million, $370 million, $567 million, and $811 million at June 30, and March 31, 2019, and December 31, September 30, and June 30, 2018, respectively.
(2) Represents loans whose repayments are predominantly insured by the FHA or guaranteed by the VA.

NET CHARGE-OFFS

Table 27: Net Charge-offs

										Quarter ended
	Jun 30, 2019		Mar 31, 2019		Dec 31, 2018		Sep 30, 2018		Jun 30, 2018	
($ in millions)	**Net loan charge-offs**	**% of avg. loans(1)**	Net loan charge-offs	% of avg. loans (1)	Net loan charge-offs	% of avg. loans (1)	Net loan charge-offs	% of avg. loans (1)	Net loan charge-offs	% of avg. loans (1)
Commercial:										
Commercial and industrial	**$ 159**	**0.18%**	$ 133	0.15%	$ 132	0.15%	$ 148	0.18%	$ 58	0.07%
Real estate mortgage	**4**	**0.01**	6	0.02	(12)	(0.04)	(1)	—	—	—
Real estate construction	**(2)**	**(0.04)**	(2)	(0.04)	(1)	(0.01)	(2)	(0.04)	(6)	(0.09)
Lease financing	**4**	**0.09**	8	0.17	13	0.26	7	0.14	15	0.32
Total commercial	**165**	**0.13**	145	0.11	132	0.10	152	0.12	67	0.05
Consumer:										
Real estate 1-4 family first mortgage	**(30)**	**(0.04)**	(12)	(0.02)	(22)	(0.03)	(25)	(0.04)	(23)	(0.03)
Real estate 1-4 family junior lien mortgage	**(19)**	**(0.24)**	(9)	(0.10)	(10)	(0.11)	(9)	(0.10)	(13)	(0.13)
Credit card	**349**	**3.68**	352	3.73	338	3.54	299	3.22	323	3.61
Automobile	**52**	**0.46**	91	0.82	133	1.16	130	1.10	113	0.93
Other revolving credit and installment	**136**	**1.56**	128	1.47	150	1.64	133	1.44	135	1.44
Total consumer	**488**	**0.45**	550	0.51	589	0.53	528	0.47	535	0.49
Total	**$ 653**	**0.28%**	$ 695	0.30%	$ 721	0.30%	$ 680	0.29%	$ 602	0.26%

(1) Quarterly net charge-offs (recoveries) as a percentage of average respective loans are annualized.

Table 27 presents net charge-offs for second quarter 2019 and the previous four quarters. Net charge-offs in second quarter 2019 were $653 million (0.28% of average total loans outstanding), compared with $602 million (0.26%) in second quarter 2018.

The increase in commercial net charge-offs from second quarter 2018 was due to higher commercial and industrial loan charge-offs and lower recoveries in the commercial and industrial portfolio. Consumer net charge-offs decreased from the prior year predominantly due to a decrease in automobile net charge-offs, partially offset by an increase in credit card net charge-offs.

ALLOWANCE FOR CREDIT LOSSES The allowance for credit losses, which consists of the allowance for loan losses and the allowance for unfunded credit commitments, is management's estimate of credit losses inherent in the loan portfolio and unfunded credit commitments at the balance sheet date, excluding loans carried at fair value. The detail of the changes in the allowance for credit losses by portfolio segment (including charge-offs and recoveries by loan class) is in Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

We apply a disciplined process and methodology to establish our allowance for credit losses each quarter. This process takes into consideration many factors, including historical and forecasted loss trends, loan-level credit quality ratings and loan grade-specific characteristics. The process involves subjective and complex judgments. In addition, we review a variety of credit metrics and trends. These credit metrics and trends, however, do not solely determine the amount of the allowance as we use several analytical tools. Our estimation approach for the commercial portfolio reflects the estimated probability of default in accordance with the borrower's financial strength, and the severity of loss in the event of default, considering the quality of any underlying collateral. Probability of default and severity at the time of default are statistically derived through historical observations of defaults and losses after default within each credit risk rating. Our estimation approach for the consumer portfolio uses forecasted losses that represent our best estimate of inherent loss based on historical experience, quantitative and other mathematical techniques. For additional information on our allowance for credit losses, see the "Critical Accounting Policies – Allowance for Credit Losses" section in our 2018 Form 10-K and Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

Table 28 presents the allocation of the allowance for credit losses by loan segment and class for the most recent quarter end and last four year ends.

Table 28: Allocation of the Allowance for Credit Losses (ACL)

(in millions)	Jun 30, 2019 ACL	Jun 30, 2019 Loans as % of total loans	Dec 31, 2018 ACL	Dec 31, 2018 Loans as % of total loans	Dec 31, 2017 ACL	Dec 31, 2017 Loans as % of total loans	Dec 31, 2016 ACL	Dec 31, 2016 Loans as % of total loans	Dec 31, 2015 ACL	Dec 31, 2015 Loans as % of total loans
Commercial:										
Commercial and industrial	**$ 3,583**	**37%**	$ 3,628	37%	$ 3,752	35%	$ 4,560	34%	$ 4,231	33%
Real estate mortgage	**1,275**	**13**	1,282	13	1,374	13	1,320	14	1,264	13
Real estate construction	**1,122**	**2**	1,200	2	1,238	3	1,294	2	1,210	3
Lease financing	**318**	**2**	307	2	268	2	220	2	167	1
Total commercial	**6,298**	**54**	6,417	54	6,632	53	7,394	52	6,872	50
Consumer:										
Real estate 1-4 family first mortgage	**729**	**30**	750	30	1,085	30	1,270	29	1,895	30
Real estate 1-4 family junior lien mortgage	**294**	**3**	431	3	608	4	815	5	1,223	6
Credit card	**2,249**	**4**	2,064	4	1,944	4	1,605	4	1,412	4
Automobile	**462**	**5**	475	5	1,039	5	817	6	529	6
Other revolving credit and installment	**571**	**4**	570	4	652	4	639	4	581	4
Total consumer	**4,305**	**46**	4,290	46	5,328	47	5,146	48	5,640	50
Total	**$ 10,603**	**100%**	$ 10,707	100%	$ 11,960	100%	$ 12,540	100%	$ 12,512	100%

	Jun 30, 2019	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015
Components:					
Allowance for loan losses	**$ 9,692**	9,775	11,004	11,419	11,545
Allowance for unfunded credit commitments	**911**	932	956	1,121	967
Allowance for credit losses	**$ 10,603**	10,707	11,960	12,540	12,512
Allowance for loan losses as a percentage of total loans	**1.02%**	1.03	1.15	1.18	1.26
Allowance for loan losses as a percentage of total net charge-offs (1)	**370**	356	376	324	399
Allowance for credit losses as a percentage of total loans	**1.12**	1.12	1.25	1.30	1.37
Allowance for credit losses as a percentage of total nonaccrual loans	**179**	165	156	126	115

(1) Total net charge-offs are annualized for quarter ended June 30, 2019.

In addition to the allowance for credit losses, there was $595 million at June 30, 2019, and $480 million at December 31, 2018, of nonaccretable difference to absorb losses on PCI loans of $1.2 billion at June 30, 2019 and $5.0 billion at December 31, 2018. The allowance for credit losses is lower than otherwise would have been required without PCI loan accounting. As a result of PCI loans, certain ratios of the Company may not be directly comparable with credit-related metrics for other financial institutions. For additional information on PCI loans, see the "Risk Management – Credit Risk Management – Purchased Credit-Impaired Loans" section and Note 6 (Loans and Allowance for Credit Losses) to Financial Statements in this Report.

The ratio of the allowance for credit losses to total nonaccrual loans may fluctuate significantly from period to period due to such factors as the mix of loan types in the portfolio, borrower credit strength and the value and marketability of collateral.

The allowance for credit losses decreased $104 million, or 1%, from December 31, 2018, primarily driven by strong overall credit portfolio performance. Total provision for credit losses was $503 million in second quarter 2019, compared with $452 million in second quarter 2018. The increase in the provision for credit losses in second quarter 2019, compared with the same period a year ago, was due to loan growth, primarily in the credit card portfolio.

We believe the allowance for credit losses of $10.6 billion at June 30, 2019, was appropriate to cover credit losses inherent in the loan portfolio, including unfunded credit commitments, at that date. The entire allowance is available to absorb credit losses inherent in the total loan portfolio. The allowance for credit losses is subject to change and reflects existing factors as of the date of determination, including economic or market conditions and ongoing internal and external examination processes. Due to the sensitivity of the allowance for credit losses to changes in the economic and business environment, it is possible that we will incur incremental credit losses not anticipated as of the balance sheet date. Future allowance levels will be based on a variety of factors, including loan growth, portfolio performance and general economic conditions. Our process for determining the allowance for credit losses is discussed in the "Critical Accounting Policies – Allowance for Credit Losses" section and Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K.

LIABILITY FOR MORTGAGE LOAN REPURCHASE LOSSES For information on our repurchase liability, see the "Risk Management – Credit Risk Management – Liability For Mortgage Loan Repurchase Losses" section in our 2018 Form 10-K.

RISKS RELATING TO SERVICING ACTIVITIES In addition to servicing loans in our portfolio, we act as servicer and/or master servicer of residential mortgage loans included in GSE-guaranteed mortgage securitizations, GNMA-guaranteed mortgage securitizations of FHA-insured/VA-guaranteed mortgages and private label mortgage securitizations, as well as for unsecuritized loans owned by institutional investors. In connection with our servicing activities, we could become subject to consent orders and settlement agreements with federal and state regulators for alleged servicing issues and practices. In general, these can require us to provide customers with loan modification relief, refinancing relief, and foreclosure prevention and assistance, as well as can impose certain monetary penalties on us.

For additional information about the risks related to our servicing activities, see the "Risk Management – Credit Risk Management – Risks Relating to Servicing Activities" section in our 2018 Form 10-K.

Asset/Liability Management

Asset/liability management involves evaluating, monitoring and managing interest rate risk, market risk, liquidity and funding. Primary oversight of interest rate risk and market risk resides with the Finance Committee of our Board of Directors (Board), which oversees the administration and effectiveness of financial risk management policies and processes used to assess and manage these risks. Primary oversight of liquidity and funding resides with the Risk Committee of the Board. At the management level we utilize a Corporate Asset/Liability Management Committee (Corporate ALCO), which consists of senior financial, risk, and business executives, to oversee these risks and report on them periodically to the Board's Finance Committee and Risk Committee as appropriate. As discussed in more detail for market risk activities below, we employ separate management level oversight specific to market risk.

INTEREST RATE RISK Interest rate risk, which potentially can have a significant earnings impact, is an integral part of being a financial intermediary. We are subject to interest rate risk because:

- assets and liabilities may mature or reprice at different times (for example, if assets reprice faster than liabilities and interest rates are generally rising, earnings will initially increase);
- assets and liabilities may reprice at the same time but by different amounts (for example, when the general level of interest rates is rising, we may increase rates paid on checking and savings deposit accounts by an amount that is less than the general rise in market interest rates);
- short-term and long-term market interest rates may change by different amounts (for example, the shape of the yield curve may affect new loan yields and funding costs differently);
- the remaining maturity of various assets or liabilities may shorten or lengthen as interest rates change (for example, if long-term mortgage interest rates increase sharply, MBS held in the debt securities portfolio may pay down slower than anticipated, which could impact portfolio income); or
- interest rates may also have a direct or indirect effect on loan demand, collateral values, credit losses, mortgage origination volume, the fair value of MSRs and other financial instruments, the value of the pension liability and other items affecting earnings.

We assess interest rate risk by comparing outcomes under various net interest income simulations using many interest rate scenarios that differ in the direction of interest rate changes, the degree of change over time, the speed of change and the projected shape of the yield curve. These simulations require assumptions regarding drivers of earnings and balance sheet composition such as loan originations, prepayment speeds on loans and debt securities, deposit flows and mix, as well as pricing strategies.

Currently, our profile is such that we project net interest income will benefit modestly from higher interest rates as our assets would reprice faster and to a greater degree than our liabilities, while in the case of lower interest rates, our assets would reprice downward and to a greater degree than our liabilities.

Our most recent simulations estimate net interest income sensitivity over the next two years under a range of both lower and higher interest rates. Measured impacts from standardized ramps (gradual changes) and shocks (instantaneous changes) are summarized in Table 29, indicating net interest income sensitivity relative to the Company's base net interest income plan. Ramp scenarios assume interest rates move gradually in parallel across the yield curve relative to the base scenario in year one, and the full amount of the ramp is held as a constant differential to the base scenario in year two. The following describes the simulation assumptions for the scenarios presented in Table 29:

- Simulations are dynamic and reflect anticipated growth across assets and liabilities.
- Other macroeconomic variables that could be correlated with the changes in interest rates are held constant.
- Mortgage prepayment and origination assumptions vary across scenarios and reflect only the impact of the higher or lower interest rates.
- Our base scenario deposit forecast incorporates mix changes consistent with the base interest rate trajectory. Deposit mix is modeled to be the same as in the base scenario across the alternative scenarios. In higher interest rate scenarios, customer activity that shifts balances into higher-yielding products could reduce expected net interest income.
- We hold the size of the projected debt and equity securities portfolios constant across scenarios.

Table 29: Net Interest Income Sensitivity Over Next Two-Year Horizon Relative to Base Expectation

		Lower Rates	Higher Rates	
($ in billions)	Base	100 bps Ramp Parallel Decrease	100 bps Instantaneous Parallel Increase	200 bps Ramp Parallel Increase
First Year of Forecasting Horizon				
Net Interest Income Sensitivity to Base Scenario	$	(1.2) - (0.7)	1.2 - 1.7	1.0 - 1.5
Key Rates at Horizon End				
Fed Funds Target	2.50 %	1.50	3.50	4.50
10-year CMT (1)	2.87	1.87	3.87	4.87
Second Year of Forecasting Horizon				
Net Interest Income Sensitivity to Base Scenario	$	(3.1) - (2.6)	1.6 - 2.1	2.3 - 2.8
Key Rates at Horizon End				
Fed Funds Target	2.50 %	1.50	3.50	4.50
10-year CMT (1)	3.16	2.16	4.16	5.16

(1) U.S. Constant Maturity Treasury Rate

The sensitivity results above do not capture interest rate sensitive noninterest income and expense impacts. Our interest rate sensitive noninterest income and expense is predominantly driven by mortgage activity, and may move in the opposite direction of our net interest income. Typically, in response to higher interest rates, mortgage activity, primarily refinancing activity, generally declines. And in response to lower interest rates, mortgage activity generally increases. Mortgage results are also impacted by the valuation of MSRs and related hedge positions. See the "Risk Management – Asset/Liability Management – Mortgage Banking Interest Rate and Market Risk" section in this Report for more information.

Interest rate sensitive noninterest income also results from changes in earnings credit for non-interest bearing deposits that reduce treasury management deposit service fees. Additionally, for the trading portfolio, our trading assets are (before the effects of certain economic hedges) generally less sensitive to changes in interest rates than the related funding liabilities. As a result, net interest income from the trading portfolio contracts and expands as interest rates rise and fall, respectively. The impact to net interest income does not include the fair value changes of trading securities and loans, which, along with the effects of related economic hedges, are recorded in noninterest income.

We use the debt securities portfolio and exchange-traded and over-the-counter (OTC) interest rate derivatives to hedge our interest rate exposures. See the "Balance Sheet Analysis – Available-for-Sale and Held-to-Maturity Debt Securities" section in this Report for more information on the use of the available-for-sale and held-to-maturity securities portfolios. The notional or contractual amount, credit risk amount and fair value of the derivatives used to hedge our interest rate risk exposures as of June 30, 2019, and December 31, 2018, are presented in Note 15 (Derivatives) to Financial Statements in this Report. We use derivatives for asset/liability management in two main ways:

- to convert the cash flows from selected asset and/or liability instruments/portfolios including investments, commercial loans and long-term debt, from fixed-rate payments to floating-rate payments, or vice versa; and
- to economically hedge our mortgage origination pipeline, funded mortgage loans and MSRs using interest rate swaps, swaptions, futures, forwards and options.

MORTGAGE BANKING INTEREST RATE AND MARKET RISK We originate, fund and service mortgage loans, which subjects us to various risks, including credit, liquidity and interest rate risks. For more information on mortgage banking interest rate and market risk, see the "Risk Management – Asset/Liability Management – Mortgage Banking Interest Rate and Market Risk" section in our 2018 Form 10-K.

While our hedging activities are designed to balance our mortgage banking interest rate risks, the financial instruments we use may not perfectly correlate with the values and income being hedged. For example, the change in the value of ARM production held for sale from changes in mortgage interest rates may or may not be fully offset by index-based financial instruments used as economic hedges for such ARMs. Additionally, hedge-carry income on our economic hedges for the MSRs may not continue at recent levels if the spread between short-term and long-term interest rates decreases, the overall level of hedges changes as interest rates change, or there are other changes in the market for mortgage forwards that affect the implied carry.

The total carrying value of our residential and commercial MSRs was $13.5 billion at June 30, 2019, and $16.1 billion at December 31, 2018. The weighted-average note rate on our portfolio of loans serviced for others was 4.33% at June 30, 2019, and 4.32% at December 31, 2018. The carrying value of our total MSRs represented 0.82% of mortgage loans serviced for others at June 30, 2019, and 0.94% of mortgage loans serviced for others at December 31, 2018.

MARKET RISK Market risk is the risk of possible economic loss from adverse changes in market risk factors such as interest rates, credit spreads, foreign exchange rates, equity and commodity prices, and the risk of possible loss due to counterparty risk. This includes implied volatility risk, basis risk, and market liquidity risk. Market risk also includes counterparty credit risk, price risk in the trading book, mortgage servicing rights and the associated hedge effectiveness risk associated with the mortgage book, and impairment on private equity investments.

The Board's Finance Committee has primary oversight responsibility for market risk and oversees the Company's market risk exposure and market risk management strategies. In addition, the Board's Risk Committee has certain oversight responsibilities with respect to market risk, including adjusting the Company's market risk appetite with input from the Finance Committee. The Finance Committee also reports key market risk matters to the Risk Committee.

At the management level, the Market and Counterparty Risk Management function, which is part of Corporate Risk, has primary oversight responsibility for market risk. The Market and Counterparty Risk Management function reports into the CRO and also provides periodic reporting related to market risk to the Board's Finance Committee. In addition, the Risk & Control Committee for each business group and enterprise function reports market risk matters to the Enterprise Risk & Control Committee.

MARKET RISK – TRADING ACTIVITIES We engage in trading activities to accommodate the investment and risk management activities of our customers and to execute economic hedging to manage certain balance sheet risks. These trading activities predominantly occur within our Wholesale Banking businesses and to a lesser extent other divisions of the Company. Debt securities held for trading, equity securities held for trading, trading loans and trading derivatives are financial instruments used in our trading activities, and all are carried at fair value. Income earned on the financial instruments used in our trading activities include net interest income, changes in fair value and realized gains and losses. Net interest income earned from our trading activities is reflected in the interest income and interest expense components of our income statement. Changes in fair value of the financial instruments used in our trading activities are reflected in net gains on trading activities, a component of noninterest income in our income statement. For more information on the financial instruments used in our trading activities and the income from these trading activities, see Note 4 (Trading Activities) to Financial Statements in this Report.

Value-at-risk (VaR) is a statistical risk measure used to estimate the potential loss from adverse moves in the financial markets. The Company uses VaR metrics complemented with sensitivity analysis and stress testing in measuring and monitoring market risk. For more information, including information regarding our monitoring activities, sensitivity analysis and stress testing, see the "Risk Management – Asset/Liability Management – Market Risk – Trading Activities" section in our 2018 Form 10-K.

Trading VaR is the measure used to provide insight into the market risk exhibited by the Company's trading positions. The Company calculates Trading VaR for risk management purposes to establish line of business and Company-wide risk limits. Trading VaR is calculated based on all trading positions on our balance sheet.

Table 30 shows the Company's Trading General VaR by risk category. As presented in Table 30, average Company Trading General VaR was $20 million for the quarter ended June 30, 2019, compared with $15 million for the quarter ended March 31, 2019, and $15 million for the quarter ended June 30, 2018. The increase in average Company Trading General VaR for the quarter ended June 30, 2019, compared with the quarter ended June 30, 2018, was mainly driven by changes in portfolio composition.

Table 30: Trading 1-Day 99% General VaR by Risk Category

	Quarter ended											
	June 30, 2019				March 31, 2019				June 30, 2018			
(in millions)	Period end	Average	Low	High	Period end	Average	Low	High	Period end	Average	Low	High
Company Trading General VaR Risk Categories												
Credit	$ 15	15	11	18	15	15	11	19	17	18	15	20
Interest rate	29	37	27	49	42	34	22	44	18	17	11	24
Equity	4	5	4	8	5	5	4	7	8	7	5	16
Commodity	2	2	1	6	2	2	1	4	1	1	1	1
Foreign exchange	1	1	1	1	1	1	1	1	0	0	0	1
Diversification benefit (1)	(32)	(40)			(46)	(42)			(29)	(28)		
Company Trading General VaR	$ 19	20			19	15			15	15		

(1) The period-end VaR was less than the sum of the VaR components described above, which is due to portfolio diversification. The diversification effect arises because the risks are not perfectly correlated causing a portfolio of positions to usually be less risky than the sum of the risks of the positions alone. The diversification benefit is not meaningful for low and high metrics since they may occur on different days.

MARKET RISK – EQUITY SECURITIES We are directly and indirectly affected by changes in the equity markets. We make and manage direct investments in start-up businesses, emerging growth companies, management buy-outs, acquisitions and corporate recapitalizations. We also invest in non-affiliated funds that make similar private equity investments. These private equity investments are made within capital allocations approved by management and the Board. The Board's policy is to review business developments, key risks and historical returns for the private equity investment portfolio at least annually. Management reviews these investments at least quarterly and assesses them for possible OTTI and observable price changes. For nonmarketable equity securities, the analysis is based on facts and circumstances of each individual investment and the expectations for that investment's cash flows, capital needs, the viability of its business model, our exit strategy, and observable price changes that are similar to the investment held. Investments in nonmarketable equity securities include private equity investments accounted for under the equity method, fair value through net income, and the measurement alternative.

In conjunction with the March 2008 initial public offering (IPO) of Visa, Inc. (Visa), we received approximately 20.7 million shares of Visa Class B common stock, the class which was apportioned to member banks of Visa at the time of the IPO. To manage our exposure to Visa and realize the value of the appreciated Visa shares, we incrementally sold these shares through a series of sales, thereby eliminating this position as of September 30, 2015. As part of these sales, we agreed to compensate the buyer for any additional contributions to a litigation settlement fund for the litigation matters associated with the Class B shares we sold. Our exposure to this retained litigation risk has been updated quarterly and is reflected on our balance sheet. For additional information about the associated litigation matters, see the "Interchange Litigation" section in Note 14 (Legal Actions) to Financial Statements in this Report.

As part of our business to support our customers, we trade public equities, listed/OTC equity derivatives and convertible bonds. We have parameters that govern these activities. We also have marketable equity securities that include investments relating to our venture capital activities. We manage these marketable equity securities within capital risk limits approved by management and the Board and monitored by Corporate ALCO and the Market Risk Committee. The fair value changes in these marketable equity securities are recognized in net income. For more information, see Note 8 (Equity Securities) to Financial Statements in this Report.

Changes in equity market prices may also indirectly affect our net income by (1) the value of third party assets under management and, hence, fee income, (2) borrowers whose ability to repay principal and/or interest may be affected by the stock market, or (3) brokerage activity, related commission income and other business activities. Each business line monitors and manages these indirect risks.

LIQUIDITY AND FUNDING The objective of effective liquidity management is to ensure that we can meet customer loan requests, customer deposit maturities/withdrawals and other cash commitments efficiently under both normal operating conditions and under periods of Wells Fargo-specific and/or market stress. To achieve this objective, the Board of Directors establishes liquidity guidelines that require sufficient asset-based liquidity to cover potential funding requirements and to avoid over-dependence on volatile, less reliable funding markets. These guidelines are monitored on a monthly basis by the Corporate ALCO and on a quarterly basis by the Board of Directors. These guidelines are established and monitored for both the consolidated company and for the Parent on a stand-alone basis to ensure that the Parent is a source of strength for its regulated, deposit-taking banking subsidiaries.

Liquidity Standards We are subject to a rule, issued by the FRB, OCC and FDIC, that implemented a quantitative liquidity requirement consistent with the liquidity coverage ratio (LCR) established by the Basel Committee on Banking Supervision (BCBS). The rule requires banking institutions, such as Wells Fargo, to hold high-quality liquid assets (HQLA), such as central bank reserves and government and corporate debt that can be converted easily and quickly into cash, in an amount equal to or greater than its projected net cash outflows during a 30-day stress period. The rule is applicable to the Company on a consolidated basis and to our insured depository institutions with total assets greater than $10 billion. In addition, rules issued by the FRB impose enhanced liquidity management standards on large bank holding companies (BHC) such as Wells Fargo.

The FRB, OCC and FDIC have proposed a rule that would implement a stable funding requirement, the net stable funding ratio (NSFR), which would require large banking organizations, such as Wells Fargo, to maintain a sufficient amount of stable funding in relation to their assets, derivative exposures and commitments over a one-year horizon period.

Liquidity Coverage Ratio As of June 30, 2019, the consolidated Company and Wells Fargo Bank, N.A. were above the minimum LCR requirement of 100%, which is calculated as HQLA divided by projected net cash outflows, as each is defined under the LCR rule. Table 31 presents the Company's quarterly average values for the daily-calculated LCR and its components calculated pursuant to the LCR rule requirements.

Table 31: Liquidity Coverage Ratio

(in millions, except ratio)	Average for Quarter ended June 30, 2019
HQLA (1)(2)	$ 352,298
Projected net cash outflows	291,624
LCR	121%

(1) Excludes excess HQLA at Wells Fargo Bank, N.A.
(2) Net of applicable haircuts required under the LCR rule.

Liquidity Sources We maintain liquidity in the form of cash, cash equivalents and unencumbered high-quality, liquid debt securities. These assets make up our primary sources of liquidity which are presented in Table 32. Our primary sources of liquidity are substantially the same in composition as HQLA under the LCR rule; however, our primary sources of liquidity will generally exceed HQLA calculated under the LCR rule due to the applicable haircuts to HQLA and the exclusion of excess HQLA at our subsidiary insured depository institutions required under the LCR rule.

Our cash is predominantly on deposit with the Federal Reserve. Debt securities included as part of our primary sources of liquidity are comprised of U.S. Treasury and federal agency debt, and mortgage-backed securities issued by federal agencies within our debt securities portfolio. We believe these debt securities provide quick sources of liquidity through sales or by pledging to obtain financing, regardless of market conditions. Some of these debt securities are within the held-to-maturity portion of our debt securities portfolio and as such are not intended for sale but may be pledged to obtain financing. Some of the legal entities within our consolidated group of companies are subject to various regulatory, tax, legal and other restrictions that can limit the transferability of their funds. We believe we maintain adequate liquidity for these entities in consideration of such funds transfer restrictions.

Table 32: Primary Sources of Liquidity

	June 30, 2019			December 31, 2018		
(in millions)	Total	Encumbered	Unencumbered	Total	Encumbered	Unencumbered
Interest-earning deposits with banks	$ 143,547	—	143,547	149,736	—	149,736
Debt securities of U.S. Treasury and federal agencies	60,655	2,384	58,271	57,688	1,504	56,184
Mortgage-backed securities of federal agencies (1)	249,619	34,627	214,992	244,211	35,656	208,555
Total	$ 453,821	37,011	416,810	451,635	37,160	414,475

(1) Included in encumbered debt securities at June 30, 2019, were debt securities with a fair value of $2.1 billion which were purchased in June 2019, but settled in July 2019.

In addition to our primary sources of liquidity shown in Table 32, liquidity is also available through the sale or financing of other debt securities including trading and/or available-for-sale debt securities, as well as through the sale, securitization or financing of loans, to the extent such debt securities and loans are not encumbered. In addition, other debt securities in our held-to-maturity portfolio, to the extent not encumbered, may be pledged to obtain financing.

Deposits have historically provided a sizable source of relatively low-cost funds. Deposits were 136% of total loans at June 30, 2019, and 135% at December 31, 2018.

Additional funding is provided by long-term debt and short-term borrowings. We access domestic and international capital markets for long-term funding (generally greater than one year) through issuances of registered debt securities, private placements and asset-backed secured funding.

Table 33 shows selected information for short-term borrowings, which generally mature in less than 30 days.

Table 33: Short-Term Borrowings

					Quarter ended
(in millions)	**Jun 30 2019**	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018
Balance, period end					
Federal funds purchased and securities sold under agreements to repurchase	$ **102,560**	93,896	92,430	92,418	89,307
Other short-term borrowings	**12,784**	12,701	13,357	13,033	15,189
Total	$ **115,344**	106,597	105,787	105,451	104,496
Average daily balance for period					
Federal funds purchased and securities sold under agreements to repurchase	$ **102,557**	95,721	93,483	92,141	89,138
Other short-term borrowings	**12,197**	12,930	12,479	13,331	14,657
Total	$ **114,754**	108,651	105,962	105,472	103,795
Maximum month-end balance for period					
Federal funds purchased and securities sold under agreements to repurchase (1)	$ **105,098**	97,650	93,918	92,531	92,103
Other short-term borrowings (2)	**12,784**	14,129	13,357	14,270	15,272

(1) Highest month-end balance in each of the last five quarters was in May and January 2019, and November, July and May 2018.
(2) Highest month-end balance in each of the last five quarters was in June and February 2019, and December, July and May 2018.

Long-Term Debt We issue long-term debt in a variety of maturities and currencies to achieve cost-efficient funding and to maintain an appropriate maturity profile. Long-term debt of $241.5 billion at June 30, 2019, increased $12.4 billion from December 31, 2018. We issued $15.8 billion and $33.1 billion of long-term debt in the second quarter and first half of 2019, respectively. Table 34 provides the aggregate carrying value of long-term debt maturities (based on contractual payment dates) for the remainder of 2019 and the following years thereafter, as of June 30, 2019.

Table 34: Maturity of Long-Term Debt

							June 30, 2019
(in millions)	Remaining 2019	2020	2021	2022	2023	Thereafter	Total
Wells Fargo & Company (Parent Only)							
Senior notes	$ 1,280	13,497	18,146	18,028	11,092	54,815	116,858
Subordinated notes	—	—	—	—	3,655	23,619	27,274
Junior subordinated notes	—	—	—	—	—	1,733	1,733
Total long-term debt - Parent	$ 1,280	13,497	18,146	18,028	14,747	80,167	145,865
Wells Fargo Bank, N.A. and other bank entities (Bank)							
Senior notes	$ 17,219	30,630	27,232	2,148	2,883	181	80,293
Subordinated notes	—	—	—	—	1,041	4,354	5,395
Junior subordinated notes	—	—	—	—	—	357	357
Securitizations and other bank debt	1,302	1,793	861	418	108	2,035	6,517
Total long-term debt - Bank	$ 18,521	32,423	28,093	2,566	4,032	6,927	92,562
Other consolidated subsidiaries							
Senior notes	$ 1,146	66	1,123	12	422	248	3,017
Securitizations and other bank debt	—	—	—	—	—	32	32
Total long-term debt - Other consolidated subsidiaries	$ 1,146	66	1,123	12	422	280	3,049
Total long-term debt	$ 20,947	45,986	47,362	20,606	19,201	87,374	241,476

Parent In March 2019, the Securities and Exchange Commission (SEC) declared effective the Parent's registration statement for the issuance of up to $50 billion of senior and subordinated notes, preferred stock and other securities. At June 30, 2019, the Parent's remaining authorized issuance capacity under this registration statement was $47.5 billion. The Parent's overall ability to issue debt securities is limited by the debt issuance authority granted by the Board. As of June 30, 2019, the Parent was authorized by the Board to issue up to $200 billion in outstanding long-term debt. The Parent's long-term debt issuance authority granted by the Board includes debt issued to affiliates and others. At June 30, 2019, the Parent had available $52.3 billion in long-term debt issuance authority, net of debt issued to affiliates. During the first half of 2019, the Parent issued $11.3 billion of senior notes, most of which were registered with the SEC. The Parent's short-term debt issuance authority granted by the Board was limited to debt issued to affiliates, and was revoked by the Board at management's request in January 2018.

The Parent's proceeds from securities issued were used for general corporate purposes, and, unless otherwise specified in the applicable prospectus or prospectus supplement, we expect the proceeds from securities issued in the future will be used for the same purposes. Depending on market conditions, we may purchase our outstanding debt securities from time to time in privately negotiated or open market transactions, by tender offer, or otherwise.

Wells Fargo Bank, N.A. As of June 30, 2019, Wells Fargo Bank, N.A. was authorized by its board of directors to issue $100 billion in outstanding short-term debt and $175 billion in outstanding long-term debt and had available $98.9 billion in short-term debt issuance authority and $97.7 billion in long-term debt issuance authority. In April 2018, Wells Fargo Bank, N.A. established a $100 billion bank note program under which, subject to any other debt outstanding under the limits described above, it may issue $50 billion in outstanding short-term senior notes and $50 billion in outstanding long-term senior or subordinated notes. At June 30, 2019, Wells Fargo Bank, N.A. had remaining issuance capacity under the bank note program of $50.0 billion in short-term senior notes and $34.2 billion in long-term senior or subordinated notes. During the first half of 2019, Wells Fargo Bank, N.A. issued $6.7 billion of unregistered senior notes.

During the first half of 2019, Wells Fargo Bank, N.A. borrowed $8.5 billion from the Federal Home Loan Bank of Des Moines, and as of June 30, 2019, Wells Fargo Bank, N.A. had outstanding advances of $45.9 billion across the Federal Home Loan Bank System. Federal Home Loan Bank advances are reflected as short-term borrowings or long-term debt on the Company's balance sheet.

Credit Ratings Investors in the long-term capital markets, as well as other market participants, generally will consider, among other factors, a company's debt rating in making investment decisions. Rating agencies base their ratings on many quantitative and qualitative factors, including capital adequacy, liquidity, asset quality, business mix, the level and quality of earnings, and rating agency assumptions regarding the probability and extent of federal financial assistance or support for certain large financial institutions. Adverse changes in these factors could result in a reduction of our credit rating; however, our debt securities do not contain credit rating covenants.

On April 1, 2019, S&P Global Ratings affirmed the credit ratings for both the Parent and Wells Fargo Bank, N.A., but revised the ratings outlook for the Parent to negative from stable. There were no other actions undertaken by the rating agencies with regard to our credit ratings during second quarter 2019. Both the Parent and Wells Fargo Bank, N.A. remain among the highest-rated financial firms in the U.S.

See the "Risk Factors" section in our 2018 Form 10-K for additional information regarding our credit ratings and the potential impact a credit rating downgrade would have on our liquidity and operations, as well as Note 15 (Derivatives) to Financial Statements in this Report for information regarding additional collateral and funding obligations required for certain derivative instruments in the event our credit ratings were to fall below investment grade.

The credit ratings of the Parent and Wells Fargo Bank, N.A. as of June 30, 2019, are presented in Table 35.

Table 35: Credit Ratings as of June 30, 2019

	Wells Fargo & Company		Wells Fargo Bank, N.A.	
	Senior debt	Short-term borrowings	Long-term deposits	Short-term borrowings
Moody's	A2	P-1	Aa1	P-1
S&P Global Ratings	A-	A-2	A+	A-1
Fitch Ratings, Inc.	A+	F1	AA	F1+
DBRS	AA (low)	R-1 (middle)	AA	R-1 (high)

FEDERAL HOME LOAN BANK MEMBERSHIP The Federal Home Loan Banks (the FHLBs) are a group of cooperatives that lending institutions use to finance housing and economic development in local communities. We are a member of the FHLBs based in Dallas, Des Moines and San Francisco. Each member of the FHLBs is required to maintain a minimum investment in capital stock of the applicable FHLB. The board of directors of each FHLB can increase the minimum investment requirements in the event it has concluded that additional capital is required to allow it to meet its own regulatory capital requirements. Any increase in the minimum investment requirements outside of specified ranges requires the approval of the Federal Housing Finance Agency. Because the extent of any obligation to increase our investment in any of the FHLBs depends entirely upon the occurrence of a future event, potential future payments to the FHLBs are not determinable.

LIBOR TRANSITION During the first half of 2019, the Company did not issue any debt securities with an interest rate indexed to the new Secured Overnight Financing Rate (SOFR) published by the Federal Reserve Bank of New York. SOFR is an alternative to LIBOR and is a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities. Due to the uncertainty surrounding the future of LIBOR, it is expected that a transition away from the widespread use of LIBOR to alternative benchmark rates will occur by the end of 2021. See the "Asset/Liability Management – Liquidity and Funding" section in our 2018 Form 10-K for additional information regarding our strategy to transition products and exposures away from LIBOR, and the "Risk Factors" section in our 2018 Form 10-K for additional information regarding the potential impact of a benchmark rate, such as LIBOR, or other referenced financial metric being significantly changed, replaced or discontinued.

We have an active program for managing capital through a comprehensive process for assessing the Company’s overall capital adequacy. Our objective is to maintain capital at an amount commensurate with our risk profile and risk tolerance objectives, and to meet both regulatory and market expectations. We primarily fund our working capital needs through the retention of earnings net of both dividends and share repurchases, as well as through the issuance of preferred stock and long and short-term debt. Retained earnings increased $6.4 billion from December 31, 2018, predominantly from Wells Fargo net income of $12.1 billion, less common and preferred stock dividends of $4.8 billion. During second quarter 2019, we issued 8.5 million shares of common stock, excluding conversions of preferred shares. During second quarter 2019, we repurchased 104.9 million shares of common stock at a cost of $4.9 billion. The amount of our repurchases are subject to various factors as discussed in the “Securities Repurchases” section below. For additional information about share repurchases, see Note 1 (Summary of Significant Accounting Policies) to Financial Statements in this Report.

Regulatory Capital Guidelines

The Company and each of our insured depository institutions are subject to various regulatory capital adequacy requirements administered by the FRB and the OCC. Risk-based capital (RBC) guidelines establish a risk-adjusted ratio relating capital to different categories of assets and off-balance sheet exposures as discussed below.

RISK-BASED CAPITAL AND RISK-WEIGHTED ASSETS The Company is subject to final and interim final rules issued by federal banking regulators to implement Basel III capital requirements for U.S. banking organizations. These rules are based on international guidelines for determining regulatory capital issued by the BCBS. The federal banking regulators’ capital rules, among other things, require on a fully phased-in basis:

- a minimum Common Equity Tier 1 (CET1) ratio of 9.0%, comprised of a 4.5% minimum requirement plus a capital conservation buffer of 2.5% and for us, as a global systemically important bank (G-SIB), a capital surcharge to be calculated annually, which is 2.0% for 2019;
- a minimum tier 1 capital ratio of 10.5%, comprised of a 6.0% minimum requirement plus the capital conservation buffer of 2.5% and the G-SIB capital surcharge of 2.0%;
- a minimum total capital ratio of 12.5%, comprised of a 8.0% minimum requirement plus the capital conservation buffer of 2.5% and the G-SIB capital surcharge of 2.0%;
- a potential countercyclical buffer of up to 2.5% to be added to the minimum capital ratios, which is currently not in effect but could be imposed by regulators at their discretion if it is determined that a period of excessive credit growth is contributing to an increase in systemic risk;
- a minimum tier 1 leverage ratio of 4.0%; and
- a minimum supplementary leverage ratio (SLR) of 5.0% (comprised of a 3.0% minimum requirement plus a supplementary leverage buffer of 2.0%) for large and internationally active BHCs.

We were required to comply with the final Basel III capital rules beginning January 2014, with certain provisions subject to phase-in periods. The entire Basel III capital rules are scheduled to be fully phased in by the end of 2021. The Basel III capital rules contain two frameworks for calculating capital requirements, a Standardized Approach, which replaced Basel I, and an Advanced Approach applicable to certain institutions, including Wells Fargo. Accordingly, in the assessment of our capital adequacy, we must report the lower of our CET1, tier 1 and total capital ratios calculated under the Standardized Approach and under the Advanced Approach.

On April 10, 2018, the FRB issued a proposed rule that would add a stress capital buffer and a stress leverage buffer to the minimum capital and tier 1 leverage ratio requirements. The buffers would be calculated based on the decrease in a financial institution’s risk-based capital and tier 1 leverage ratios under the supervisory severely adverse scenario in the Comprehensive Capital Analysis and Review (CCAR), plus four quarters of planned common stock dividends. The stress capital buffer would replace the 2.5% capital conservation buffer under the Standardized Approach, whereas the stress leverage buffer would be added to the current 4% minimum tier 1 leverage ratio.

Because the Company has been designated as a G-SIB, we are also subject to the FRB's rule implementing the additional capital surcharge of between 1.0-4.5% on the minimum capital requirements of G-SIBs. Under the rule, we must annually calculate our surcharge under two methods and use the higher of the two surcharges. The first method (method one) considers our size, interconnectedness, cross-jurisdictional activity, substitutability, and complexity, consistent with the methodology developed by the BCBS and the Financial Stability Board (FSB). The second (method two) uses similar inputs, but replaces substitutability with use of short-term wholesale funding and will generally result in higher surcharges than the BCBS methodology. The G-SIB surcharge became fully phased-in on January 1, 2019. Our 2019 G-SIB surcharge under method two is 2.0% of the Company’s risk-weighted assets (RWAs), which is the higher of method one and method two. Because the G-SIB surcharge is calculated annually based on data that can differ over time, the amount of the surcharge is subject to change in future years. Under the Standardized Approach, our CET1 ratio (fully phased-in) of 11.97% exceeded the minimum of 9.0% by 297 basis points at June 30, 2019.

Beginning January 1, 2018, the requirements for calculating CET1 and tier 1 capital, along with RWAs, became fully phased-in. However, the requirements for calculating tier 2 and total capital are still in accordance with Transition Requirements. The tables that follow provide information about our risk-based capital and related ratios as calculated under Basel III capital guidelines. For banking industry regulatory reporting purposes, we continue to report our tier 2 and total capital in accordance with Transition Requirements but are managing our capital based on a fully phased-in calculation. For information about our capital requirements calculated in accordance with Transition Requirements, see Note 23 (Regulatory and Agency Capital Requirements) to Financial Statements in this Report.

Table 36 summarizes our CET1, tier 1 capital, total capital, risk-weighted assets and capital ratios on a fully phased-in basis at June 30, 2019 and December 31, 2018. As of June 30, 2019, our CET1, tier 1, and total capital ratios were lower using RWAs calculated under the Standardized Approach.

Table 36: Capital Components and Ratios (Fully Phased-In) (1)

(in millions, except ratios)		June 30, 2019 Advanced Approach	June 30, 2019 Standardized Approach	December 31, 2018 Advanced Approach	December 31, 2018 Standardized Approach
Common Equity Tier 1	(A)	$ **149,183**	**149,183**	146,363	146,363
Tier 1 Capital	(B)	**170,675**	**170,675**	167,866	167,866
Total Capital	(C)	**200,291**	**208,298**	198,103	206,346
Risk-Weighted Assets	(D)	**1,182,838**	**1,246,683**	1,177,350	1,247,210
Common Equity Tier 1 Capital Ratio	(A)/(D)	**12.61%**	**11.97** *	12.43	11.74 *
Tier 1 Capital Ratio	(B)/(D)	**14.43**	**13.69** *	14.26	13.46 *
Total Capital Ratio	(C)/(D)	**16.93**	**16.71** *	16.83	16.54 *

*Denotes the lowest capital ratio as determined under the Advanced and Standardized Approaches.
(1) Fully phased-in total capital amounts and ratios are considered non-GAAP financial measures that are used by management, bank regulatory agencies, investors and analysts to assess and monitor the Company's capital position. See Table 37 for information regarding the calculation and components of CET1, tier 1 capital, total capital and RWAs, as well as the corresponding reconciliation of our fully phased-in regulatory capital amounts to GAAP financial measures.

Table 37 provides information regarding the calculation and composition of our risk-based capital under the Advanced and Standardized Approaches at June 30, 2019 and December 31, 2018.

Table 37: Risk-Based Capital Calculation and Components

(in millions)		June 30, 2019 Advanced Approach	June 30, 2019 Standardized Approach	December 31, 2018 Advanced Approach	December 31, 2018 Standardized Approach
Total equity		$ **200,037**	**200,037**	197,066	197,066
Adjustments:					
Preferred stock		**(23,021)**	**(23,021)**	(23,214)	(23,214)
Additional paid-in capital on ESOP preferred stock		**(78)**	**(78)**	(95)	(95)
Unearned ESOP shares		**1,292**	**1,292**	1,502	1,502
Noncontrolling interests		**(995)**	**(995)**	(900)	(900)
Total common stockholders' equity		**177,235**	**177,235**	174,359	174,359
Adjustments:					
Goodwill		**(26,415)**	**(26,415)**	(26,418)	(26,418)
Certain identifiable intangible assets (other than MSRs)		**(493)**	**(493)**	(559)	(559)
Other assets (1)		**(2,251)**	**(2,251)**	(2,187)	(2,187)
Applicable deferred taxes (2)		**788**	**788**	785	785
Investment in certain subsidiaries and other		**319**	**319**	383	383
Common Equity Tier 1 (Fully Phased-In)		**149,183**	**149,183**	146,363	146,363
Common Equity Tier 1 (Fully Phased-In)		$ **149,183**	**149,183**	146,363	146,363
Preferred stock		**23,021**	**23,021**	23,214	23,214
Additional paid-in capital on ESOP preferred stock		**78**	**78**	95	95
Unearned ESOP shares		**(1,292)**	**(1,292)**	(1,502)	(1,502)
Other		**(315)**	**(315)**	(304)	(304)
Total Tier 1 capital (Fully Phased-In)	(A)	**170,675**	**170,675**	167,866	167,866
Long-term debt and other instruments qualifying as Tier 2		**27,223**	**27,223**	27,946	27,946
Qualifying allowance for credit losses (3)		**2,596**	**10,603**	2,463	10,706
Other		**(203)**	**(203)**	(172)	(172)
Total Tier 2 capital (Fully Phased-In)	(B)	**29,616**	**37,623**	30,237	38,480
Effect of Transition Requirements		**519**	**519**	695	695
Total Tier 2 capital (Transition Requirements)		$ **30,135**	**38,142**	30,932	39,175
Total qualifying capital (Fully Phased-In)	(A)+(B)	$ **200,291**	**208,298**	198,103	206,346
Total Effect of Transition Requirements		**519**	**519**	695	695
Total qualifying capital (Transition Requirements)		$ **200,810**	**208,817**	198,798	207,041
Risk-Weighted Assets (RWAs) (4)(5):					
Credit risk		$ **802,054**	**1,203,474**	803,273	1,201,246
Market risk		**43,209**	**43,209**	45,964	45,964
Operational risk		**337,575**	**—**	328,113	N/A
Total RWAs (Fully Phased-In)		$ **1,182,838**	**1,246,683**	1,177,350	1,247,210

(1) Represents goodwill and other intangibles on nonmarketable equity securities, which are included in other assets.
(2) Applicable deferred taxes relate to goodwill and other intangible assets. They were determined by applying the combined federal statutory rate and composite state income tax rates to the difference between book and tax basis of the respective goodwill and intangible assets at period end.
(3) Under the Advanced Approach the allowance for credit losses that exceeds expected credit losses is eligible for inclusion in Tier 2 Capital, to the extent the excess allowance does not exceed 0.6% of Advanced credit RWAs, and under the Standardized Approach, the allowance for credit losses is includable in Tier 2 Capital up to 1.25% of Standardized credit RWAs, with any excess allowance for credit losses being deducted from total RWAs.
(4) RWAs calculated under the Advanced Approach utilize a risk-sensitive methodology, which relies upon the use of internal credit models based upon our experience with internal rating grades. Advanced Approach also includes an operational risk component, which reflects the risk of operating loss resulting from inadequate or failed internal processes or systems.
(5) Under the regulatory guidelines for risk-based capital, on-balance sheet assets and credit equivalent amounts of derivatives and off-balance sheet items are assigned to one of several broad risk categories according to the obligor, or, if relevant, the guarantor or the nature of any collateral. The aggregate dollar amount in each risk category is then multiplied by the risk weight associated with that category. The resulting weighted values from each of the risk categories are aggregated for determining total RWAs.

Table 38 presents the changes in Common Equity Tier 1 under the Advanced Approach for the six months ended June 30, 2019.

Table 38: Analysis of Changes in Common Equity Tier 1

(in millions)		
Common Equity Tier 1 (Fully Phased-In) at December 31, 2018	$	146,363
Net income applicable to common stock		11,355
Common stock dividends		(4,069)
Common stock issued, repurchased, and stock compensation-related items		(8,030)
Goodwill		3
Certain identifiable intangible assets (other than MSRs)		67
Other assets (1)		(64)
Applicable deferred taxes (2)		3
Investment in certain subsidiaries and other		3,555
Change in Common Equity Tier 1		2,820
Common Equity Tier 1 (Fully Phased-In) at June 30, 2019	$	149,183

(1) Represents goodwill and other intangibles on nonmarketable equity securities, which are included in other assets.
(2) Applicable deferred taxes relate to goodwill and other intangible assets. They were determined by applying the combined federal statutory rate and composite state income tax rates to the difference between book and tax basis of the respective goodwill and intangible assets at period end.

Table 39 presents net changes in the components of RWAs under the Advanced and Standardized Approaches for the six months ended June 30, 2019.

Table 39: Analysis of Changes in RWAs

(in millions)		Advanced Approach	Standardized Approach
RWAs (Fully Phased-In) at December 31, 2018	$	1,177,350	1,247,210
Net change in credit risk RWAs		(1,219)	2,228
Net change in market risk RWAs		(2,755)	(2,755)
Net change in operational risk RWAs		9,462	—
Total change in RWAs		5,488	(527)
RWAs (Fully Phased-In) at June 30, 2019	$	1,182,838	1,246,683

TANGIBLE COMMON EQUITY We also evaluate our business based on certain ratios that utilize tangible common equity. Tangible common equity is a non-GAAP financial measure and represents total equity less preferred equity, noncontrolling interests, and goodwill and certain identifiable intangible assets (including goodwill and intangible assets associated with certain of our nonmarketable equity securities, but excluding mortgage servicing rights), net of applicable deferred taxes. These tangible common equity ratios are as follows:

- Tangible book value per common share, which represents tangible common equity divided by common shares outstanding.
- Return on average tangible common equity (ROTCE), which represents our annualized earnings contribution as a percentage of tangible common equity.

The methodology of determining tangible common equity may differ among companies. Management believes that tangible book value per common share and return on average tangible common equity, which utilize tangible common equity, are useful financial measures because they enable investors and others to assess the Company's use of equity.

Table 40 provides a reconciliation of these non-GAAP financial measures to GAAP financial measures.

Table 40: Tangible Common Equity

			Balance at period end			Average balance				
			Quarter ended			Quarter ended			Six months ended	
(in millions, except ratios)			**Jun 30, 2019**	Mar 31, 2019	Jun 30, 2018	**Jun 30, 2019**	Mar 31, 2019	Jun 30, 2018	**Jun 30, 2019**	Jun 30, 2018
Total equity		$	**200,037**	198,733	206,069	**199,685**	198,349	206,067	**199,021**	206,123
Adjustments:										
Preferred stock			**(23,021)**	(23,214)	(25,737)	**(23,023)**	(23,214)	(26,021)	**(23,118)**	(26,089)
Additional paid-in capital on ESOP preferred stock			**(78)**	(95)	(116)	**(78)**	(95)	(129)	**(87)**	(141)
Unearned ESOP shares			**1,292**	1,502	2,051	**1,294**	1,502	2,348	**1,397**	2,428
Noncontrolling interests			**(995)**	(901)	(881)	**(939)**	(899)	(919)	**(919)**	(958)
Total common stockholders' equity	(A)		**177,235**	176,025	181,386	**176,939**	175,643	181,346	**176,294**	181,363
Adjustments:										
Goodwill			**(26,415)**	(26,420)	(26,429)	**(26,415)**	(26,420)	(26,444)	**(26,417)**	(26,480)
Certain identifiable intangible assets (other than MSRs)			**(493)**	(522)	(1,091)	**(505)**	(543)	(1,223)	**(524)**	(1,355)
Other assets (1)			**(2,251)**	(2,131)	(2,160)	**(2,155)**	(2,159)	(2,271)	**(2,157)**	(2,252)
Applicable deferred taxes (2)			**788**	771	874	**780**	784	889	**782**	911
Tangible common equity	(B)	$	**148,864**	147,723	152,580	**148,644**	147,305	152,297	**147,978**	152,187
Common shares outstanding	(C)		**4,419.6**	4,511.9	4,849.1	**N/A**	N/A	N/A	**N/A**	N/A
Net income applicable to common stock (3)	(D)		**N/A**	N/A	N/A	$ **5,848**	5,507	4,792	**11,355**	9,525
Book value per common share	(A)/(C)	$	**40.10**	39.01	37.41	**N/A**	N/A	N/A	**N/A**	N/A
Tangible book value per common share	(B)/(C)		**33.68**	32.74	31.47	**N/A**	N/A	N/A	**N/A**	N/A
Return on average common stockholders' equity (ROE) (annualized)	(D)/(A)		**N/A**	N/A	N/A	**13.26%**	12.71	10.60	**12.99**	10.59
Return on average tangible common equity (ROTCE) (annualized)	(D)/(B)		**N/A**	N/A	N/A	**15.78**	15.16	12.62	**15.47**	12.62

(1) Represents goodwill and other intangibles on nonmarketable equity securities, which are included in other assets.
(2) Applicable deferred taxes relate to goodwill and other intangible assets. They were determined by applying the combined federal statutory rate and composite state income tax rates to the difference between book and tax basis of the respective goodwill and intangible assets at period end.
(3) Quarter ended net income applicable to common stock is annualized for the respective ROE and ROTCE ratios.

SUPPLEMENTARY LEVERAGE RATIO In April 2014, federal banking regulators finalized a rule that enhances the SLR requirements for BHCs, like Wells Fargo, and their insured depository institutions. The calculation of the SLR is Tier 1 capital divided by the Company's total leverage exposure. Total leverage exposure consists of total average assets, less goodwill and other permitted Tier 1 capital deductions (net of deferred tax liabilities), plus certain off-balance sheet exposures. The rule, which became effective on January 1, 2018, requires a covered BHC to maintain a SLR of at least 5.0% (comprised of the 3.0% minimum requirement plus a supplementary leverage buffer of 2.0%) to avoid restrictions on capital distributions and discretionary bonus payments. The rule also requires that all of our insured depository institutions maintain a SLR of 6.0% under applicable regulatory capital adequacy guidelines. In April 2018, the FRB and OCC proposed rules (the "Proposed SLR Rules") that would replace the 2% supplementary leverage buffer with a buffer equal to one-half of the firm's G-SIB capital surcharge. The Proposed SLR Rules would similarly tailor the current 6% SLR requirement for our insured depository institutions.

At June 30, 2019, our SLR for the Company was 7.7%. Based on our review, our current leverage levels would exceed the applicable requirements for each of our insured depository institutions as well. See Table 41 for information regarding the calculation and components of the SLR.

Table 41: Supplementary Leverage Ratio

(in millions, except ratio)		Quarter ended June 30, 2019
Tier 1 capital	(A)	$ 170,675
Total average assets		1,900,627
Less: Goodwill and other permitted Tier 1 capital deductions (net of deferred tax liabilities)		28,821
Total adjusted average assets		1,871,806
Plus adjustments for off-balance sheet exposures:		
Derivatives (1)		68,229
Repo-style transactions (2)		5,033
Other (3)		257,539
Total off-balance sheet exposures		330,801
Total leverage exposure	(B)	$ 2,202,607
Supplementary leverage ratio	(A)/(B)	7.7%

(1) Adjustment represents derivatives and collateral netting exposures as defined for supplementary leverage ratio determination purposes.
(2) Adjustment represents counterparty credit risk for repo-style transactions where Wells Fargo & Company is the principal (i.e., principal counterparty facing the client).
(3) Adjustment represents credit equivalent amounts of other off-balance sheet exposures not already included as derivatives and repo-style transactions exposures.

OTHER REGULATORY CAPITAL MATTERS In December 2016, the FRB finalized rules to address the amount of equity and unsecured long-term debt a U.S. G-SIB must hold to improve its resolvability and resiliency, often referred to as Total Loss Absorbing Capacity (TLAC). Under the rules, which became effective on January 1, 2019, U.S. G-SIBs are required to have a minimum TLAC amount (consisting of CET1 capital and additional tier 1 capital issued directly by the top-tier or covered BHC plus eligible external long-term debt) equal to the greater of (i) 18% of RWAs and (ii) 7.5% of total leverage exposure (the denominator of the SLR calculation). Additionally, U.S. G-SIBs are required to maintain (i) a TLAC buffer equal to 2.5% of RWAs plus the firm's applicable G-SIB capital surcharge calculated under method one plus any applicable countercyclical buffer to be added to the 18% minimum and (ii) an external TLAC leverage buffer equal to 2.0% of total leverage exposure to be added to the 7.5% minimum, in order to avoid restrictions on capital distributions and discretionary bonus payments. The rules also require U.S. G-SIBs to have a minimum amount of eligible unsecured long-term debt equal to the greater of (i) 6.0% of RWAs plus the firm's applicable G-SIB capital surcharge calculated under method two and (ii) 4.5% of the total leverage exposure. In addition, the rules impose certain restrictions on the operations and liabilities of the top-tier or covered BHC in order to further facilitate an orderly resolution, including prohibitions on the issuance of short-term debt to external investors and on entering into derivatives and certain other types of financial contracts with external counterparties. While the rules permit permanent grandfathering of a significant portion of otherwise ineligible long-term debt that was issued prior to December 31, 2016, long-term debt issued after that date must be fully compliant with the eligibility requirements of the rules in order to count toward the minimum TLAC amount. As a result of the rules, we will need to issue additional long-term debt to remain compliant with the requirements. Under the Proposed SLR Rules, the 2% external TLAC leverage buffer would be replaced with a buffer equal to one-half of the firm's G-SIB capital surcharge. Additionally, the Proposed SLR Rules would modify the leverage component for calculating the minimum amount of eligible unsecured long-term debt from 4.5% of total leverage exposure to 2.5% of total leverage exposure plus one-half of the firm's G-SIB capital surcharge. As of June 30, 2019, our eligible external TLAC as a percentage of total risk-weighted assets was 24.09% compared with a required minimum of 22.0%. Similar to the risk-based capital requirements, we determine minimum required TLAC based on the greater of RWAs determined under the Standardized and Advanced approaches.

In addition, as discussed in the "Risk Management – Asset/Liability Management – Liquidity and Funding – Liquidity Standards" section in this Report, federal banking regulators have issued a final rule regarding the U.S. implementation of the Basel III LCR and a proposed rule regarding the NSFR.

Capital Planning and Stress Testing

Our planned long-term capital structure is designed to meet regulatory and market expectations. We believe that our long-term targeted capital structure enables us to invest in and grow our business, satisfy our customers' financial needs in varying environments, access markets, and maintain flexibility to return capital to our shareholders. Our long-term targeted capital structure also considers capital levels sufficient to exceed capital requirements including the G-SIB surcharge. Accordingly, based on the final Basel III capital rules under the lower of the Standardized or Advanced Approaches CET1 capital ratios, we currently target a long-term CET1 capital ratio at or in excess of 10%, which includes a 2% G-SIB surcharge. Our capital targets are subject to change based on various factors, including changes to the regulatory capital framework and expectations for large banks promulgated by bank regulatory agencies, planned capital actions, changes in our risk profile and other factors. As discussed above in the "Capital Management – Regulatory Capital Guidelines – Risk-Based Capital and Risk-Weighted Assets" section of this Report, the FRB has proposed including a stress capital buffer to replace the current 2.5% capital conservation buffer. Under the proposal, it is expected that the adoption of CECL accounting would be included in the calculation of the stress capital buffer. We expect that implementation of the stress capital buffer may increase the level and volatility of minimum capital ratio requirements, which may cause our current long-term CET1 capital ratio target of 10% to increase.

Under the FRB's capital plan rule, large BHCs are required to submit capital plans annually for review to determine if the FRB has any objections before making any capital distributions. The rule requires updates to capital plans in the event of material changes in a BHC's risk profile, including as a result of any significant acquisitions. The FRB assesses, among other things, the overall financial condition, risk profile, and capital adequacy of BHCs when evaluating capital plans.

Our 2019 capital plan, which was submitted on April 4, 2019, as part of CCAR, included a comprehensive capital outlook supported by an assessment of expected sources and uses of capital over a given planning horizon under a range of expected and stress scenarios. As part of the 2019 CCAR, the FRB also generated a supervisory stress test, which assumed a sharp decline in the economy and significant decline in asset pricing using the information provided by the Company to estimate performance. The FRB reviewed the supervisory stress results both as required under the Dodd-Frank Act using a common set of capital actions for all large BHCs and by taking into account the Company's proposed capital actions. The FRB published its supervisory stress test results as required under the Dodd-Frank Act on June 21, 2019. On June 27, 2019, the FRB notified us that it did not object to our capital plan included in the 2019 CCAR. On July 23, 2019, the Company increased its quarterly common stock dividend to $0.51 per share, as approved by the Board. The plan also includes up to $23.1 billion of gross common stock repurchases, subject to management discretion, for the four-quarter period from third quarter 2019 through second quarter 2020.

Federal banking regulators require stress tests to evaluate whether an institution has sufficient capital to continue to operate during periods of adverse economic and financial conditions. These stress testing requirements set forth the timing and type of stress test activities large BHCs and banks must undertake as well as rules governing stress testing controls, oversight and disclosure requirements. The rules also limit a large BHC's ability to make capital distributions to the extent its actual capital issuances were less than amounts indicated in its capital plan. As required under the FRB's stress testing rule, we must submit a mid-cycle stress test based on second quarter data and scenarios developed by the Company. In October 2018, the FRB proposed a rule that would, among other things, eliminate the mid-cycle stress test requirement for banks beginning in 2020.

Securities Repurchases

From time to time the Board authorizes the Company to repurchase shares of our common stock. Although we announce when the Board authorizes share repurchases, we typically do not give any public notice before we repurchase our shares. Future stock repurchases may be private or open-market repurchases, including block transactions, accelerated or delayed block transactions, forward repurchase transactions, and similar transactions. Additionally, we may enter into plans to purchase stock that satisfy the conditions of Rule 10b5-1 of the Securities Exchange Act of 1934. Various factors determine the amount of our share repurchases, including our capital requirements, the number of shares we expect to issue for employee benefit plans and acquisitions, market conditions (including the trading price of our stock), and regulatory and legal considerations, including the FRB's response to our capital plan and to changes in our risk profile. Due to the various factors impacting the amount of our share repurchases and the fact that we tend to be in the market regularly to satisfy repurchase considerations under our capital plan, our share repurchases occur at various price levels. We may suspend share repurchase activity at any time.

In October 2018, the Board authorized the repurchase of 350 million shares of our common stock. At June 30, 2019, we had remaining authority to repurchase approximately 193 million shares, subject to regulatory and legal conditions. In July 2019, the Board authorized the repurchase of an additional 350 million shares of our common stock. For more information about share repurchases during second quarter 2019, see Part II, Item 2 in this Report.

Historically, our policy has been to repurchase shares under the "safe harbor" conditions of Rule 10b-18 of the Securities Exchange Act of 1934 including a limitation on the daily volume of repurchases. Rule 10b-18 imposes an additional daily volume limitation on share repurchases during a pending merger or acquisition in which shares of our stock will constitute some or all of the consideration. Our management may determine that during a pending stock merger or acquisition when the safe harbor would otherwise be available, it is in our best interest to repurchase shares in excess of this additional daily volume limitation. In such cases, we intend to repurchase shares in compliance with the other conditions of the safe harbor, including the standing daily volume limitation that applies whether or not there is a pending stock merger or acquisition.

Regulatory Matters

Since the enactment of the Dodd-Frank Act in 2010, the U.S. financial services industry has been subject to a significant increase in regulation and regulatory oversight initiatives. This increased regulation and oversight has substantially changed how most U.S. financial services companies conduct business and has increased their regulatory compliance costs.

For a discussion of certain consent orders applicable to the Company, see the "Overview" section in this Report. The following supplements our discussion of the other significant regulations and regulatory oversight initiatives that have affected or may affect our business contained in the "Regulatory Matters" and "Risk Factors" sections in our 2018 Form 10-K and the "Regulatory Matters" section in our 2019 First Quarter Report on Form 10-Q.

"LIVING WILL" REQUIREMENTS AND RELATED MATTERS

Rules adopted by the FRB and the FDIC under the Dodd-Frank Act require large financial institutions, including Wells Fargo, to prepare and periodically revise resolution plans, so-called "living-wills", that would facilitate their resolution in the event of material distress or failure. Under the rules, resolution plans are required to provide strategies for resolution under the Bankruptcy Code and other applicable insolvency regimes that can be accomplished in a reasonable period of time and in a manner that mitigates the risk that failure would have serious adverse effects on the financial stability of the United States. We submitted our 2019 resolution plan to the FRB and FDIC on June 27, 2019. Our national bank subsidiary, Wells Fargo Bank, N.A. (the "Bank"), is also required to prepare a resolution plan. If the FRB or FDIC determines that our resolution plan has deficiencies, they may impose more stringent capital, leverage or liquidity requirements on us or restrict our growth, activities or operations until we adequately remedy the deficiencies. If the FRB or FDIC ultimately determines that we have been unable to remedy any deficiencies, they could require us to divest certain assets or operations.

We must also prepare and submit to the FRB a recovery plan that identifies a range of options that we may consider during times of idiosyncratic or systemic economic stress to remedy any financial weaknesses and restore market confidence without extraordinary government support. Recovery options include the possible sale, transfer or disposal of assets, securities, loan portfolios or businesses. The Bank must also prepare and submit to the OCC a recovery plan that sets forth the Bank's plan to remain a going concern when the Bank is experiencing considerable financial or operational stress, but has not yet deteriorated to the point where liquidation or resolution is imminent. If either the FRB or the OCC determine that our recovery plan is deficient, they may impose fines, restrictions on our business or ultimately require us to divest assets.

If Wells Fargo were to fail, it may be resolved in a bankruptcy proceeding or, if certain conditions are met, under the resolution regime created by the Dodd-Frank Act known as the "orderly liquidation authority." The orderly liquidation authority allows for the appointment of the FDIC as receiver for a systemically important financial institution that is in default or in danger of default if, among other things, the resolution of the institution under the U.S. Bankruptcy Code would have serious adverse effects on financial stability in the United States. If the FDIC is appointed as receiver for Wells Fargo & Company (the "Parent"), then the orderly liquidation authority, rather than the U.S. Bankruptcy Code, would determine the powers of the receiver and the rights and obligations of our security holders. The FDIC's orderly liquidation authority requires that security holders of a company in receivership bear all losses before U.S. taxpayers are exposed to any losses, and allows the FDIC to disregard the strict priority of creditor claims under the U.S. Bankruptcy Code in certain circumstances.

Whether under the U.S. Bankruptcy Code or by the FDIC under the orderly liquidation authority, Wells Fargo could be resolved using a "multiple point of entry" strategy, in which the Parent and one or more of its subsidiaries would each undergo separate resolution proceedings, or a "single point of entry" strategy, in which the Parent would likely be the only material legal entity to enter resolution proceedings. The FDIC has announced that a single point of entry strategy may be a desirable strategy under its implementation of the orderly liquidation authority, but not all aspects of how the FDIC might exercise this authority are known and additional rulemaking is possible.

The strategy described in our most recent resolution plan submission is a single point of entry strategy. However, we are not obligated to maintain a single point of entry strategy, and the strategy reflected in our resolution plan is not binding in the event of an actual resolution of Wells Fargo, whether conducted under the U.S. Bankruptcy Code or by the FDIC under the orderly liquidation authority.

To facilitate the orderly resolution of systemically important financial institutions in case of material distress or failure, federal banking regulations require that institutions, such as Wells Fargo, maintain a minimum amount of equity and unsecured debt to absorb losses and recapitalize operating subsidiaries. Federal banking regulators have also required measures to facilitate the continued operation of operating subsidiaries notwithstanding the failure of their parent companies, such as limitations on parent guarantees, and have issued guidance encouraging institutions to take legally binding measures to provide capital and liquidity resources to certain subsidiaries in order to facilitate an orderly resolution. In response to the regulators' guidance and to facilitate the orderly resolution of the Company, on June 28, 2017, the Parent entered into a support agreement, as amended and restated on June 26, 2019 (the "Support Agreement"), with WFC Holdings, LLC, an intermediate holding company and subsidiary of the Parent (the "IHC"), the Bank, Wells Fargo Securities, LLC ("WFS"), Wells Fargo Clearing Services, LLC ("WFCS"), and certain other direct and indirect subsidiaries of the Parent designated as material entities for resolution planning purposes (the "Covered Entities") or identified as related support entities in our resolution plan (the "Related Support Entities"). Pursuant to the Support Agreement, the Parent transferred a significant amount of its assets, including the majority of its cash, deposits, liquid securities and intercompany loans (but excluding its equity interests in its subsidiaries and certain other assets), to the IHC and will continue to transfer those types of assets to the IHC from time to time. In the event of our material financial distress or failure, the IHC will be obligated to use the transferred assets to provide capital and/or liquidity to the Bank, WFS, WFCS, and the Covered Entities pursuant to the Support Agreement. Under the Support Agreement, the IHC will also provide funding and liquidity to the Parent through subordinated notes and a committed line of credit, which, together with the issuance of dividends, is expected to provide the Parent, during business as usual operating conditions, with the same access to cash necessary to service its debts, pay dividends, repurchase its shares, and perform its other obligations as it would have had if it had not entered into these arrangements and transferred any assets. If certain liquidity and/or capital metrics fall below defined triggers, or if the Parent's board of directors authorizes it to file a case under the U.S. Bankruptcy Code, the subordinated notes would be forgiven, the committed line of credit would terminate, and the IHC's ability to pay dividends to the Parent would be restricted, any of which could materially and adversely impact the Parent's liquidity and its ability to satisfy its debts and other obligations, and could result in the commencement of bankruptcy proceedings by the Parent at an earlier time than might have otherwise occurred if the Support Agreement were not implemented. The respective obligations under the Support Agreement of the Parent, the IHC, the Bank, and the Related Support Entities are secured pursuant to a related security agreement.

BROKER-DEALER STANDARDS OF CONDUCT In June 2019, the SEC finalized a rule that requires broker-dealers to act in the best interest of a retail customer when making a recommendation of any securities transaction or investment strategy involving securities. This rule impacts the manner in which business is conducted with customers seeking investment advice and may affect certain investment product offerings.

Critical Accounting Policies

Our significant accounting policies (see Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K) are fundamental to understanding our results of operations and financial condition because they require that we use estimates and assumptions that may affect the value of our assets or liabilities and financial results. Five of these policies are critical because they require management to make difficult, subjective and complex judgments about matters that are inherently uncertain and because it is likely that materially different amounts would be reported under different conditions or using different assumptions. These policies govern:

- the allowance for credit losses;
- the valuation of residential MSRs;
- the fair value of financial instruments;
- income taxes; and
- liability for contingent litigation losses.

Management and the Board's Audit and Examination Committee have reviewed and approved these critical accounting policies. These policies are described further in the "Financial Review – Critical Accounting Policies" section and Note 1 (Summary of Significant Accounting Policies) to Financial Statements in our 2018 Form 10-K.

Current Accounting Developments

Table 42 provides the significant accounting updates applicable to us that have been issued by the FASB but are not yet effective.

Table 42: Current Accounting Developments – Issued Standards

Standard	Description	Effective date and financial statement impact
Accounting Standard Update (ASU or Update) 2018-12 – Financial Services – Insurance (Topic 944): *Targeted Improvements to the Accounting for Long-Duration Contracts*	The Update requires all features in long-duration insurance contracts that meet the definition of a market risk benefit to be measured at fair value through earnings with changes in fair value attributable to our own credit risk recognized in other comprehensive income. Currently, two measurement models exist for these features, fair value and insurance accrual. The Update requires the use of a standardized discount rate and routine updates for insurance assumptions used in valuing the liability for future policy benefits for traditional long-duration contracts. The Update also simplifies the amortization of deferred acquisition costs.	The guidance becomes effective on January 1, 2021. Certain of our variable annuity reinsurance products meet the definition of market risk benefits and will require the associated insurance-related reserves for these products to be measured at fair value as of the earliest period presented, with the cumulative effect on fair value for changes attributable to our own credit risk recognized in the beginning balance of accumulated other comprehensive income. The cumulative effect of the difference between fair value and carrying value, excluding the effect on fair value for our own credit risk, will be recognized in the opening balance of retained earnings. As of June 30, 2019, we held $1.0 billion in insurance-related reserves of which $444 million was in scope of the Update. A total of $387 million was associated with products that meet the definition of market risk benefits, and of this amount, $21 million was measured at fair value under current accounting standards. The market risk benefits are largely indexed to U.S. equity and fixed income markets. Upon adoption, we may incur periodic earnings volatility from changes in the fair value of market risk benefits primarily due to the long duration of these contracts. We plan to economically hedge this volatility, where feasible. The ultimate impact of these changes will depend on the composition of our market risk benefits portfolio at the date of adoption. Changes to the liability for future policy benefits for traditional long-duration contracts and deferred acquisition costs will be applied to all outstanding long-duration contracts on the basis of their existing carrying amounts at the beginning of the earliest period presented, and are not expected to be material.
ASU 2016-13 – Financial Instruments – Credit Losses (Topic 326): *Measurement of Credit Losses on Financial Instruments* and subsequent related Updates	The Update changes the accounting for credit losses measurement on loans and debt securities. For loans and held-to-maturity debt securities, the Update requires a current expected credit loss (CECL) measurement to estimate the allowance for credit losses (ACL) for the remaining estimated life of the financial asset (including off-balance sheet credit exposures) using historical experience, current conditions, and reasonable and supportable forecasts. The Update eliminates the existing guidance for PCI loans, but requires an allowance for purchased financial assets with more than insignificant deterioration since origination. In addition, the Update modifies the other-than-temporary impairment model for available-for-sale debt securities to require an allowance for credit impairment instead of a direct write-down, which allows for reversal of credit impairments in future periods based on improvements in credit.	We expect to adopt the guidance in first quarter 2020. Our implementation process includes loss forecasting model development, evaluation of technical accounting topics, updates to our allowance documentation, reporting processes and related internal controls, and overall operational readiness for our adoption of the Update, which will continue throughout 2019, including parallel runs for CECL alongside our current allowance process. We are in the process of developing, validating, and implementing models used to estimate credit losses under CECL. We have completed substantially all of our loss forecasting models, and we expect to complete the validation process for our loan models during 2019. Our current planned approach for estimating expected life-time credit losses for loans and debt securities includes the following key components: • An initial forecast period of one year for all portfolio segments and classes of financing receivables and off-balance-sheet credit exposures. This period reflects management's expectation of losses based on forward-looking economic scenarios over that time. • A historical loss forecast period covering the remaining contractual life, adjusted for prepayments, by portfolio segment and class of financing receivables based on the change in key historical economic variables during representative historical expansionary and recessionary periods. • A reversion period of up to 2 years connecting the initial loss forecast to the historical loss forecast based on economic conditions at the measurement date. • We will utilize discounted cash flow (DCF) methods to measure credit impairment for loans modified in a troubled debt restructuring, unless they are collateral dependent and measured at the fair value of collateral. The DCF methods would obtain estimated life-time credit losses using the conceptual components described above. • For available-for-sale debt securities and certain beneficial interests classified as held-to-maturity, we plan to utilize the DCF methods to measure the ACL, which will incorporate expected credit losses using the conceptual components described above. Based on our portfolio composition at June 30, 2019, and the current economic environment, we currently estimate an overall decrease in our ACL for loans of approximately $1.5 billion. The reduction reflects an expected decrease for commercial loans, given their short contractual maturities, partially offset by an expected increase for longer duration consumer loans and includes recoveries related to residential mortgage loans that were previously written down during the last credit cycle and are below their current recovery value. The change from the estimate we provided last quarter primarily reflects a reduction in our expected recoveries on loans previously written down due to the reclassification of $1.8 billion of residential mortgage loans to held for sale, as well as additional refinements to our assumptions and changes in our portfolio composition. We will continue to evaluate and refine the results of our loss estimates throughout 2019. We will recognize an ACL for held-to-maturity and available-for-sale debt securities. The ACL on available-for-sale debt securities will be subject to a limitation based on the fair value of the debt securities. Based on the credit quality of our existing debt securities portfolio, we do not expect the ACL for held-to-maturity and available-for-sale debt securities to be significant. The ultimate effect of CECL on our ACL will depend on the size and composition of our portfolio, the portfolio's credit quality and economic conditions at the time of adoption, as well as any refinements to our models, methodology and other key assumptions. At adoption, we will have a cumulative-effect adjustment to retained earnings for our change in the ACL, which will impact our capital. A decrease in our ACL will result in an increase to our regulatory capital amounts and ratios. Federal banking regulatory agencies have provided relief for an initial capital decrease from the Update by allowing a phased adoption over four years, on a straight-line basis.

In addition to the list above, the following Updates are applicable to us but are not expected to have a material impact on our consolidated financial statements:

- ASU 2019-04 – Codification Improvements to Topic 326, *Financial Instruments – Credit Losses*, Topic 815, *Derivatives and Hedging*, and Topic 825, *Financial Instruments*. This Update includes guidance on recoveries of financial assets, which has been included in the discussion for ASU 2016-13 above.
- ASU 2018-17 – Consolidation (Topic 810): *Targeted Improvements to Related Party Guidance for Variable Interest Entities*
- ASU 2018-15 – Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract (a consensus of the FASB Emerging Issues Task Force)*
- ASU 2018-13 – Fair Value Measurement (Topic 820): *Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement*. This Update has been partially adopted; however, the remainder of this Update will be adopted at the effective date of January 1, 2020.
- ASU 2017-04 – Intangibles – Goodwill and Other (Topic 350): *Simplifying the Test for Goodwill Impairment*

Forward-Looking Statements

This document contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, we may make forward-looking statements in our other documents filed or furnished with the SEC, and our management may make forward-looking statements orally to analysts, investors, representatives of the media and others. Forward-looking statements can be identified by words such as "anticipates," "intends," "plans," "seeks," "believes," "estimates," "expects," "target," "projects," "outlook," "forecast," "will," "may," "could," "should," "can" and similar references to future periods. In particular, forward-looking statements include, but are not limited to, statements we make about: (i) the future operating or financial performance of the Company, including our outlook for future growth; (ii) our noninterest expense and efficiency ratio; (iii) future credit quality and performance, including our expectations regarding future loan losses and allowance levels; (iv) the appropriateness of the allowance for credit losses; (v) our expectations regarding net interest income and net interest margin; (vi) loan growth or the reduction or mitigation of risk in our loan portfolios; (vii) future capital or liquidity levels or targets and our estimated Common Equity Tier 1 ratio under Basel III capital standards; (viii) the performance of our mortgage business and any related exposures; (ix) the expected outcome and impact of legal, regulatory and legislative developments, as well as our expectations regarding compliance therewith; (x) future common stock dividends, common share repurchases and other uses of capital; (xi) our targeted range for return on assets, return on equity, and return on tangible common equity; (xii) the outcome of contingencies, such as legal proceedings; and (xiii) the Company's plans, objectives and strategies.

Forward-looking statements are not based on historical facts but instead represent our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking statements. We caution you, therefore, against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. While there is no assurance that any list of risks and uncertainties or risk factors is complete, important factors that could cause actual results to differ materially from those in the forward-looking statements include the following, without limitation:

- current and future economic and market conditions, including the effects of declines in housing prices, high unemployment rates, U.S. fiscal debt, budget and tax matters, geopolitical matters, and any slowdown in global economic growth;
- our capital and liquidity requirements (including under regulatory capital standards, such as the Basel III capital standards) and our ability to generate capital internally or raise capital on favorable terms;
- financial services reform and other current, pending or future legislation or regulation that could have a negative effect on our revenue and businesses, including the Dodd-Frank Act and other legislation and regulation relating to bank products and services;
- developments in our mortgage banking business, including the extent of the success of our mortgage loan modification efforts, the amount of mortgage loan repurchase demands that we receive, any negative effects relating to our mortgage servicing, loan modification or foreclosure practices, and the effects of regulatory or judicial requirements or guidance impacting our mortgage banking business and any changes in industry standards;
- our ability to realize any efficiency ratio or expense target as part of our expense management initiatives, including as a result of business and economic cyclicality, seasonality, changes in our business composition and operating environment, growth in our businesses and/or acquisitions, and unexpected expenses relating to, among other things, litigation and regulatory matters;
- the effect of the current interest rate environment or changes in interest rates on our net interest income, net interest margin and our mortgage originations, mortgage servicing rights and mortgage loans held for sale;
- significant turbulence or a disruption in the capital or financial markets, which could result in, among other things, reduced investor demand for mortgage loans, a reduction in the availability of funding or increased funding costs, and declines in asset values and/or recognition of other-than-temporary impairment on securities held in our debt securities and equity securities portfolios;
- the effect of a fall in stock market prices on our investment banking business and our fee income from our brokerage, asset and wealth management businesses;
- negative effects from the retail banking sales practices matter and from other instances where customers may have experienced financial harm, including on our legal, operational and compliance costs, our ability to engage in certain business activities or offer certain products or services, our ability to keep and attract customers, our ability

to attract and retain qualified team members, and our reputation;
- resolution of regulatory matters, litigation, or other legal actions, which may result in, among other things, additional costs, fines, penalties, restrictions on our business activities, reputational harm, or other adverse consequences;
- a failure in or breach of our operational or security systems or infrastructure, or those of our third-party vendors or other service providers, including as a result of cyber attacks;
- the effect of changes in the level of checking or savings account deposits on our funding costs and net interest margin;
- fiscal and monetary policies of the Federal Reserve Board; and
- the other risk factors and uncertainties described under "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018.

In addition to the above factors, we also caution that the amount and timing of any future common stock dividends or repurchases will depend on the earnings, cash requirements and financial condition of the Company, market conditions, capital requirements (including under Basel capital standards), common stock issuance requirements, applicable law and regulations (including federal securities laws and federal banking regulations), and other factors deemed relevant by the Company's Board of Directors, and may be subject to regulatory approval or conditions.

For more information about factors that could cause actual results to differ materially from our expectations, refer to our reports filed with the Securities and Exchange Commission, including the discussion under "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018, as filed with the Securities and Exchange Commission and available on its website at www.sec.gov.

Any forward-looking statement made by us speaks only as of the date on which it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

<u>Forward-looking Non-GAAP Financial Measures.</u> From time to time management may discuss forward-looking non-GAAP financial measures, such as forward-looking estimates or targets for return on average tangible common equity. We are unable to provide a reconciliation of forward-looking non-GAAP financial measures to their most directly comparable GAAP financial measures because we are unable to provide, without unreasonable effort, a meaningful or accurate calculation or estimation of amounts that would be necessary for the reconciliation due to the complexity and inherent difficulty in forecasting and quantifying future amounts or when they may occur. Such unavailable information could be significant to future results.

Risk Factors

An investment in the Company involves risk, including the possibility that the value of the investment could fall substantially and that dividends or other distributions on the investment could be reduced or eliminated. For a discussion of risk factors that could adversely affect our financial results and condition, and the value of, and return on, an investment in the Company, we refer you to the "Risk Factors" section in our 2018 Form 10-K.

Controls and Procedures

Disclosure Controls and Procedures

The Company's management evaluated the effectiveness, as of June 30, 2019, of the Company's disclosure controls and procedures. The Company's chief executive officer and chief financial officer participated in the evaluation. Based on this evaluation, the Company's chief executive officer and chief financial officer concluded that the Company's disclosure controls and procedures were effective as of June 30, 2019.

Internal Control Over Financial Reporting

Internal control over financial reporting is defined in Rule 13a-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles (GAAP) and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. No change occurred during second quarter 2019 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Wells Fargo & Company and Subsidiaries

Consolidated Statement of Income (Unaudited)

		Quarter ended June 30,		Six months ended June 30,	
(in millions, except per share amounts)		**2019**	2018	**2019**	2018
Interest income					
Debt securities	$	**3,781**	3,594	**7,722**	7,008
Mortgage loans held for sale		**195**	198	**347**	377
Loans held for sale		**20**	48	**44**	72
Loans		**11,316**	10,912	**22,670**	21,491
Equity securities		**236**	221	**446**	452
Other interest income		**1,438**	1,042	**2,760**	1,962
Total interest income		**16,986**	16,015	**33,989**	31,362
Interest expense					
Deposits		**2,213**	1,268	**4,239**	2,358
Short-term borrowings		**646**	398	**1,242**	709
Long-term debt		**1,900**	1,658	**3,827**	3,234
Other interest expense		**132**	150	**275**	282
Total interest expense		**4,891**	3,474	**9,583**	6,583
Net interest income		**12,095**	12,541	**24,406**	24,779
Provision for credit losses		**503**	452	**1,348**	643
Net interest income after provision for credit losses		**11,592**	12,089	**23,058**	24,136
Noninterest income					
Service charges on deposit accounts		**1,206**	1,163	**2,300**	2,336
Trust and investment fees		**3,568**	3,675	**6,941**	7,358
Card fees		**1,025**	1,001	**1,969**	1,909
Other fees		**800**	846	**1,570**	1,646
Mortgage banking		**758**	770	**1,466**	1,704
Insurance		**93**	102	**189**	216
Net gains from trading activities		**229**	191	**586**	434
Net gains on debt securities (1)		**20**	41	**145**	42
Net gains from equity securities (2)		**622**	295	**1,436**	1,078
Lease income		**424**	443	**867**	898
Other		**744**	485	**1,318**	1,087
Total noninterest income		**9,489**	9,012	**18,787**	18,708
Noninterest expense					
Salaries		**4,541**	4,465	**8,966**	8,828
Commission and incentive compensation		**2,597**	2,642	**5,442**	5,410
Employee benefits		**1,336**	1,245	**3,274**	2,843
Equipment		**607**	550	**1,268**	1,167
Net occupancy		**719**	722	**1,436**	1,435
Core deposit and other intangibles		**27**	265	**55**	530
FDIC and other deposit assessments		**144**	297	**303**	621
Other		**3,478**	3,796	**6,621**	8,190
Total noninterest expense		**13,449**	13,982	**27,365**	29,024
Income before income tax expense		**7,632**	7,119	**14,480**	13,820
Income tax expense		**1,294**	1,810	**2,175**	3,184
Net income before noncontrolling interests		**6,338**	5,309	**12,305**	10,636
Less: Net income from noncontrolling interests		**132**	123	**239**	314
Wells Fargo net income	$	**6,206**	5,186	**12,066**	10,322
Less: Preferred stock dividends and other		**358**	394	**711**	797
Wells Fargo net income applicable to common stock	$	**5,848**	4,792	**11,355**	9,525
Per share information					
Earnings per common share	$	**1.31**	0.98	**2.52**	1.95
Diluted earnings per common share		**1.30**	0.98	**2.50**	1.94
Average common shares outstanding		**4,469.4**	4,865.8	**4,510.2**	4,875.7
Diluted average common shares outstanding		**4,495.0**	4,899.8	**4,540.1**	4,916.1

(1) Total other-than-temporary impairment (OTTI) losses (reversal of losses) were $6 million and $(3) million for second quarter 2019 and 2018, respectively. Of total OTTI, losses of $7 million and $8 million were recognized in earnings, and losses (reversal of losses) of $(1) million and $(11) million were recognized as non-credit-related OTTI in other comprehensive income for second quarter 2019 and 2018, respectively. Total OTTI losses were $51 million and $14 million for the first half of 2019 and 2018, respectively. Of total OTTI, losses of $52 million and $18 million were recognized in earnings, and losses (reversal of losses) of $(1) million and $(4) million were recognized as non-credit-related OTTI in other comprehensive income for the first half of 2019 and 2018, respectively.

(2) Includes OTTI losses of $31 million and $237 million for second quarter 2019 and 2018, respectively, and $67 million and $257 million for the first half of 2019 and 2018, respectively.

The accompanying notes are an integral part of these statements.

Wells Fargo & Company and Subsidiaries

Consolidated Statement of Comprehensive Income (Unaudited)

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Wells Fargo net income	**$ 6,206**	5,186	**12,066**	10,322
Other comprehensive income (loss), before tax:				
Debt securities:				
Net unrealized gains (losses) arising during the period	**1,709**	(617)	**4,540**	(4,060)
Reclassification of net (gains) losses to net income	**39**	49	**(42)**	117
Derivative and hedging activities:				
Net unrealized gains (losses) arising during the period	**57**	(150)	**22**	(392)
Reclassification of net losses to net income	**79**	77	**158**	137
Defined benefit plans adjustments:				
Net actuarial and prior service gains (losses) arising during the period	**—**	—	**(4)**	6
Amortization of net actuarial loss, settlements and other to net income	**33**	29	**68**	61
Foreign currency translation adjustments:				
Net unrealized gains (losses) arising during the period	**14**	(83)	**56**	(85)
Other comprehensive income (loss), before tax	**1,931**	(695)	**4,798**	(4,216)
Income tax benefit (expense) related to other comprehensive income	**(473)**	154	**(1,167)**	1,016
Other comprehensive income (loss), net of tax	**1,458**	(541)	**3,631**	(3,200)
Less: Other comprehensive loss from noncontrolling interests	**—**	(1)	**—**	(1)
Wells Fargo other comprehensive income (loss), net of tax	**1,458**	(540)	**3,631**	(3,199)
Wells Fargo comprehensive income	**7,664**	4,646	**15,697**	7,123
Comprehensive income from noncontrolling interests	**132**	122	**239**	313
Total comprehensive income	**$ 7,796**	4,768	**15,936**	7,436

The accompanying notes are an integral part of these statements.

Wells Fargo & Company and Subsidiaries

Consolidated Balance Sheet

(in millions, except shares)		Jun 30, 2019	Dec 31, 2018
Assets		**(Unaudited)**	
Cash and due from banks	$	**20,880**	23,551
Interest-earning deposits with banks		**143,547**	149,736
Total cash, cash equivalents, and restricted cash		**164,427**	173,287
Federal funds sold and securities purchased under resale agreements		**112,119**	80,207
Debt securities:			
Trading, at fair value		**70,208**	69,989
Available-for-sale, at fair value		**265,983**	269,912
Held-to-maturity, at cost (fair value $147,864 and $142,115)		**145,876**	144,788
Mortgage loans held for sale (includes $16,343 and $11,771 carried at fair value) (1)		**22,998**	15,126
Loans held for sale (includes $1,118 and $1,469 carried at fair value) (1)		**1,181**	2,041
Loans (includes $202 and $244 carried at fair value) (1)		**949,878**	953,110
Allowance for loan losses		**(9,692)**	(9,775)
Net loans		**940,186**	943,335
Mortgage servicing rights:			
Measured at fair value		**12,096**	14,649
Amortized		**1,407**	1,443
Premises and equipment, net		**9,435**	8,920
Goodwill		**26,415**	26,418
Derivative assets		**13,162**	10,770
Equity securities (includes $35,950 and $29,556 carried at fair value) (1)		**61,537**	55,148
Other assets		**76,358**	79,850
Total assets (2)	$	**1,923,388**	1,895,883
Liabilities			
Noninterest-bearing deposits	$	**340,813**	349,534
Interest-bearing deposits		**947,613**	936,636
Total deposits		**1,288,426**	1,286,170
Short-term borrowings		**115,344**	105,787
Derivative liabilities		**8,399**	8,499
Accrued expenses and other liabilities		**69,706**	69,317
Long-term debt		**241,476**	229,044
Total liabilities (3)		**1,723,351**	1,698,817
Equity			
Wells Fargo stockholders' equity:			
Preferred stock		**23,021**	23,214
Common stock – $1-2/3 par value, authorized 9,000,000,000 shares; issued 5,481,811,474 shares		**9,136**	9,136
Additional paid-in capital		**60,625**	60,685
Retained earnings		**164,551**	158,163
Cumulative other comprehensive income (loss)		**(2,224)**	(6,336)
Treasury stock – 1,062,220,277 shares and 900,557,866 shares		**(54,775)**	(47,194)
Unearned ESOP shares		**(1,292)**	(1,502)
Total Wells Fargo stockholders' equity		**199,042**	196,166
Noncontrolling interests		**995**	900
Total equity		**200,037**	197,066
Total liabilities and equity	$	**1,923,388**	1,895,883

(1) Parenthetical amounts represent assets and liabilities that we are required to carry at fair value or have elected the fair value option.
(2) Our consolidated assets at June 30, 2019, and December 31, 2018, include the following assets of certain variable interest entities (VIEs) that can only be used to settle the liabilities of those VIEs: Cash and due from banks, $11 million and $139 million; Interest-earning deposits with banks, $8 million and $8 million; Debt securities, $60 million and $45 million; Net loans, $13.6 billion and $13.6 billion; Equity securities, $121 million and $85 million; Other assets, $208 million and $221 million; and Total assets, $14.0 billion and $14.1 billion, respectively.
(3) Our consolidated liabilities at June 30, 2019, and December 31, 2018, include the following VIE liabilities for which the VIE creditors do not have recourse to Wells Fargo: Derivative liabilities, $1 million and $0 million; Accrued expenses and other liabilities, $201 million and $191 million; Long-term debt, $748 million and $816 million; and Total liabilities, $950 million and $1.0 billion, respectively.

The accompanying notes are an integral part of these statements.

Consolidated Statement of Changes in Equity (Unaudited)

	Preferred stock		Common stock	
(in millions, except shares)	*Shares*	Amount	*Shares*	Amount
Balance March 31, 2019	***9,377,211***	**$ 23,214**	***4,511,947,830***	**$ 9,136**
Net income				
Other comprehensive income (loss), net of tax				
Noncontrolling interests				
Common stock issued			***8,491,923***	
Common stock repurchased			***(104,852,744)***	
Preferred stock issued to ESOP	**—**	**—**		
Preferred stock released by ESOP				
Preferred stock converted to common shares	***(193,042)***	**(193)**	***4,004,188***	
Common stock warrants repurchased/exercised				
Preferred stock issued	**—**	**—**		
Common stock dividends				
Preferred stock dividends				
Stock incentive compensation expense				
Net change in deferred compensation and related plans				
Net change	***(193,042)***	**(193)**	***(92,356,633)***	**—**
Balance June 30, 2019	***9,184,169***	**$ 23,021**	***4,419,591,197***	**$ 9,136**
Balance March 31, 2018	*12,546,235*	$ 26,227	*4,873,882,481*	$ 9,136
Net income				
Other comprehensive income (loss), net of tax				
Noncontrolling interests				
Common stock issued			*1,834,029*	
Common stock repurchased (1)			*(35,771,728)*	
Preferred stock issued to ESOP	—	—		
Preferred stock released by ESOP				
Preferred stock converted to common shares	*(490,251)*	(490)	*9,123,072*	
Common stock warrants repurchased/exercised				
Preferred stock issued	—	—		
Common stock dividends				
Preferred stock dividends				
Stock incentive compensation expense				
Net change in deferred compensation and related plans				
Net change	*(490,251)*	(490)	*(24,814,627)*	—
Balance June 30, 2018	*12,055,984*	$ 25,737	*4,849,067,854*	$ 9,136

(1) For the quarter ended June 30, 2018, additional paid-in capital was reduced by $1.0 billion for the upfront payment related to a private forward repurchase transaction that settled in third quarter 2018 and reduced our third quarter 2018 shares of common stock by 18.8 million shares upon settlement.

Quarter ended June 30,

Wells Fargo stockholders' equity							
Additional paid-in capital	Retained earnings	Cumulative other comprehensive income	Treasury stock	Unearned ESOP shares	Total Wells Fargo stockholders' equity	Noncontrolling interests	Total equity
60,409	**160,776**	**(3,682)**	**(50,519)**	**(1,502)**	**197,832**	**901**	**198,733**
	6,206				**6,206**	**132**	**6,338**
		1,458			**1,458**	**—**	**1,458**
—					**—**	**(38)**	**(38)**
(2)	**(38)**		**439**		**399**		**399**
—			**(4,898)**		**(4,898)**		**(4,898)**
—				**—**	**—**		**—**
(17)				**210**	**193**		**193**
(15)			**208**		**—**		**—**
—					**—**		**—**
—					**—**		**—**
20	**(2,035)**				**(2,015)**		**(2,015)**
	(358)				**(358)**		**(358)**
247					**247**		**247**
(17)			**(5)**		**(22)**		**(22)**
216	**3,775**	**1,458**	**(4,256)**	**210**	**1,210**	**94**	**1,304**
60,625	**164,551**	**(2,224)**	**(54,775)**	**(1,292)**	**199,042**	**995**	**200,037**
60,399	147,928	(4,921)	(31,246)	(2,571)	204,952	958	205,910
	5,186				5,186	123	5,309
		(540)			(540)	(1)	(541)
—					—	(199)	(199)
(20)	—		93		73		73
(1,000)			(1,923)		(2,923)		(2,923)
—				—	—		—
(30)				520	490		490
22			468		—		—
(1)					(1)		(1)
—					—		—
17	(1,917)				(1,900)		(1,900)
	(394)				(394)		(394)
258					258		258
(1)			(12)		(13)		(13)
(755)	2,875	(540)	(1,374)	520	236	(77)	159
59,644	150,803	(5,461)	(32,620)	(2,051)	205,188	881	206,069

Consolidated Statement of Changes in Equity (Unaudited)

	Preferred stock		Common stock	
(in millions, except shares)	*Shares*	Amount	*Shares*	Amount
Balance December 31, 2018	***9,377,216***	**$ 23,214**	***4,581,253,608***	**$ 9,136**
Cumulative effect from change in accounting policies (1)				
Balance January 1, 2019	***9,377,216***	**$ 23,214**	***4,581,253,608***	**$ 9,136**
Net income				
Other comprehensive income (loss), net of tax				
Noncontrolling interests				
Common stock issued			***36,549,824***	
Common stock repurchased			***(202,216,454)***	
Preferred stock issued to ESOP	**—**	**—**		
Preferred stock released by ESOP				
Preferred stock converted to common shares	***(193,047)***	**(193)**	***4,004,219***	
Common stock warrants repurchased/exercised				
Preferred stock issued	**—**	**—**		
Common stock dividends				
Preferred stock dividends				
Stock incentive compensation expense				
Net change in deferred compensation and related plans				
Net change	***(193,047)***	**(193)**	***(161,662,411)***	**—**
Balance June 30, 2019	***9,184,169***	**$ 23,021**	***4,419,591,197***	**$ 9,136**
Balance December 31, 2017	*11,677,235*	$ 25,358	*4,891,616,628*	$ 9,136
Cumulative effect from change in accounting policies (2)				
Balance January 1, 2018	*11,677,235*	$ 25,358	*4,891,616,628*	$ 9,136
Net income				
Other comprehensive income (loss), net of tax				
Noncontrolling interests				
Common stock issued			*30,259,788*	
Common stock repurchased (3)			*(86,339,185)*	
Preferred stock issued to ESOP	*1,100,000*	1,100		
Preferred stock released by ESOP				
Preferred stock converted to common shares	*(721,251)*	(721)	*13,530,623*	
Common stock warrants repurchased/exercised				
Preferred stock issued	—	—		
Common stock dividends				
Preferred stock dividends				
Stock incentive compensation expense				
Net change in deferred compensation and related plans				
Net change	*378,749*	379	*(42,548,774)*	—
Balance June 30, 2018	*12,055,984*	$ 25,737	*4,849,067,854*	$ 9,136

(1) Effective January 1, 2019, we adopted ASU 2016-02 – Leases (Topic 842) and subsequent related Updates, ASU 2017-08 – Receivables – Nonrefundable Fees and Other Costs (Subtopic 310-20): *Premium Amortization on Purchased Callable Debt Securities*. See Note 1 (Summary of Significant Accounting Policies) for more information.
(2) Effective January 1, 2018, we adopted ASU 2016-04 – Liabilities – Extinguishments of Liabilities (Subtopic 405-20): *Recognition of Breakage for Certain Prepaid Stored-Value Products,* ASU 2016-01 – Financial Instruments – Overall (Subtopic 825-10): *Recognition and Measurement of Financial Assets and Financial Liabilities*, and ASU 2014-09 – *Revenue from Contracts With Customers (Topic 606) and subsequent related Updates*. See Note 1 (Summary of Significant Accounting Policies) for more information.
(3) For the quarter ended June 30, 2018, additional paid-in capital was reduced by $1.0 billion for the upfront payment related to a private forward repurchase transaction that settled in third quarter 2018 and reduced our third quarter 2018 shares of common stock by 18.8 million shares upon settlement.

Six months ended June 30,

Wells Fargo stockholders' equity							
Additional paid-in capital	Retained earnings	Cumulative other comprehensive income	Treasury stock	Unearned ESOP shares	Total Wells Fargo stockholders' equity	Noncontrolling interests	Total equity
60,685	**158,163**	**(6,336)**	**(47,194)**	**(1,502)**	**196,166**	**900**	**197,066**
	(492)	**481**			**(11)**		**(11)**
60,685	**157,671**	**(5,855)**	**(47,194)**	**(1,502)**	**196,155**	**900**	**197,055**
	12,066				**12,066**	**239**	**12,305**
		3,631			**3,631**	**—**	**3,631**
—					**—**	**(144)**	**(144)**
(2)	**(367)**		**1,907**		**1,538**		**1,538**
—			**(9,718)**		**(9,718)**		**(9,718)**
—				**—**	**—**		**—**
(17)				**210**	**193**		**193**
(15)			**208**		**—**		**—**
—					**—**		**—**
—					**—**		**—**
39	**(4,108)**				**(4,069)**		**(4,069)**
	(711)				**(711)**		**(711)**
791					**791**		**791**
(856)			**22**		**(834)**		**(834)**
(60)	**6,880**	**3,631**	**(7,581)**	**210**	**2,887**	**95**	**2,982**
60,625	**164,551**	**(2,224)**	**(54,775)**	**(1,292)**	**199,042**	**995**	**200,037**
60,893	145,263	(2,144)	(29,892)	(1,678)	206,936	1,143	208,079
	94	(118)			(24)		(24)
60,893	145,357	(2,262)	(29,892)	(1,678)	206,912	1,143	208,055
	10,322				10,322	314	10,636
		(3,199)			(3,199)	(1)	(3,200)
7					7	(575)	(568)
5	(231)		1,507		1,281		1,281
(1,000)			(4,952)		(5,952)		(5,952)
43				(1,143)	—		—
(49)				770	721		721
27			694		—		—
(158)					(158)		(158)
—					—		—
30	(3,841)				(3,811)		(3,811)
	(804)				(804)		(804)
695					695		695
(849)			23		(826)		(826)
(1,249)	5,446	(3,199)	(2,728)	(373)	(1,724)	(262)	(1,986)
59,644	150,803	(5,461)	(32,620)	(2,051)	205,188	881	206,069

Wells Fargo & Company and Subsidiaries

Consolidated Statement of Cash Flows (Unaudited)

(in millions)		Six months ended June 30, 2019	2018
Cash flows from operating activities:			
Net income before noncontrolling interests	$	**12,305**	10,636
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for credit losses		**1,348**	643
Changes in fair value of MSRs, MLHFS and LHFS carried at fair value		**2,408**	(787)
Depreciation, amortization and accretion		**3,100**	2,835
Other net (gains)		**(1,360)**	(6,285)
Stock-based compensation		**1,388**	1,286
Originations and purchases of mortgage loans held for sale		**(63,836)**	(80,948)
Proceeds from sales of and paydowns on mortgage loans held for sale		**39,741**	60,898
Net change in:			
Debt and equity securities, held for trading		**14,777**	16,371
Loans held for sale		**619**	(411)
Deferred income taxes		**(821)**	1,118
Derivative assets and liabilities		**(2,461)**	958
Other assets		**7,194**	7,547
Other accrued expenses and liabilities		**(7,120)**	520
Net cash provided by operating activities		**7,282**	14,381
Cash flows from investing activities:			
Net change in:			
Federal funds sold and securities purchased under resale agreements		**(31,912)**	(1,161)
Available-for-sale debt securities:			
Proceeds from sales		**6,682**	6,151
Prepayments and maturities		**17,657**	17,377
Purchases		**(18,306)**	(26,300)
Held-to-maturity debt securities:			
Paydowns and maturities		**5,145**	5,431
Purchases		**(154)**	—
Equity securities, not held for trading:			
Proceeds from sales and capital returns		**2,320**	3,337
Purchases		**(2,426)**	(2,791)
Loans:			
Loans originated by banking subsidiaries, net of principal collected		**(7,008)**	(445)
Proceeds from sales (including participations) of loans held for investment		**8,196**	7,879
Purchases (including participations) of loans		**(1,001)**	(668)
Principal collected on nonbank entities' loans		**1,770**	3,229
Loans originated by nonbank entities		**(2,604)**	(2,998)
Proceeds from sales of foreclosed assets and short sales		**1,405**	1,954
Other, net		**512**	(284)
Net cash provided (used) by investing activities		**(19,724)**	10,711
Cash flows from financing activities:			
Net change in:			
Deposits		**1,938**	(67,101)
Short-term borrowings		**9,557**	1,240
Long-term debt:			
Proceeds from issuance		**33,091**	21,308
Repayment		**(26,357)**	(22,305)
Preferred stock:			
Cash dividends paid		**(711)**	(872)
Common stock:			
Proceeds from issuance		**242**	446
Stock tendered for payment of withholding taxes		**(272)**	(311)
Repurchased		**(9,718)**	(5,952)
Cash dividends paid		**(3,954)**	(3,722)
Net change in noncontrolling interests		**(124)**	(232)
Other, net		**(110)**	(89)
Net cash provided (used) by financing activities		**3,582**	(77,590)
Net change in cash, cash equivalents, and restricted cash		**(8,860)**	(52,498)
Cash, cash equivalents, and restricted cash at beginning of period		**173,287**	215,947
Cash, cash equivalents, and restricted cash at end of period	$	**164,427**	163,449
Supplemental cash flow disclosures:			
Cash paid for interest	$	**9,354**	6,352
Cash paid for income taxes		**2,516**	1,679

The accompanying notes are an integral part of these statements. See Note 1 (Summary of Significant Accounting Policies) for noncash activities.

See the Glossary of Acronyms at the end of this Report for terms used throughout the Financial Statements and related Notes.

Note 1: Summary of Significant Accounting Policies

Wells Fargo & Company is a diversified financial services company. We provide banking, trust and investments, mortgage banking, investment banking, retail banking, brokerage, and consumer and commercial finance through banking locations, the internet and other distribution channels to consumers, businesses and institutions in all 50 states, the District of Columbia, and in foreign countries. When we refer to "Wells Fargo," "the Company," "we," "our" or "us," we mean Wells Fargo & Company and Subsidiaries (consolidated). Wells Fargo & Company (the Parent) is a financial holding company and a bank holding company. We also hold a majority interest in a real estate investment trust, which has publicly traded preferred stock outstanding.

Our accounting and reporting policies conform with U.S. generally accepted accounting principles (GAAP) and practices in the financial services industry. For discussion of our significant accounting policies, see Note 1 (Summary of Significant Accounting Policies) in our Annual Report on Form 10-K for the year ended December 31, 2018 (2018 Form 10-K). To prepare the financial statements in conformity with GAAP, management must make estimates based on assumptions about future economic and market conditions (for example, unemployment, market liquidity, real estate prices, etc.) that affect the reported amounts of assets and liabilities at the date of the financial statements, income and expenses during the reporting period and the related disclosures. Although our estimates contemplate current conditions and how we expect them to change in the future, it is reasonably possible that actual conditions could be worse than anticipated in those estimates, which could materially affect our results of operations and financial condition. Management has made significant estimates in several areas, including:

- allowance for credit losses (Note 6 (Loans and Allowance for Credit Losses));
- valuations of residential mortgage servicing rights (MSRs) (Note 10 (Securitizations and Variable Interest Entities) and Note 11 (Mortgage Banking Activities));
- valuations of financial instruments (Note 15 (Derivatives) and Note 16 (Fair Values of Assets and Liabilities));
- liabilities for contingent litigation losses (Note 14 (Legal Actions)); and
- income taxes.

Actual results could differ from those estimates.

These unaudited interim financial statements reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results for the periods presented. These adjustments are of a normal recurring nature, unless otherwise disclosed in this Form 10-Q. The results of operations in the interim financial statements do not necessarily indicate the results that may be expected for the full year. The interim financial information should be read in conjunction with our 2018 Form 10-K.

Accounting Standards Adopted in 2019

In first quarter 2019, we adopted the following new accounting guidance:

- Accounting Standards Update (ASU or Update) 2018-16 – Derivatives and Hedging (Topic 815): *Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes*
- ASU 2017-08 – Receivables – Nonrefundable Fees and Other Costs (Subtopic 310-20): *Premium Amortization on Purchased Callable Debt Securities*
- ASU 2016-02 – Leases (Topic 842) and subsequent related Updates, including early adoption of ASU 2019-01 – Leases (Topic 842): *Codification Improvements*

ASU 2018-16 expands the list of U.S. benchmark interest rates permitted in the application of hedge accounting. The Update adds the OIS rate based on SOFR as a U.S. benchmark interest rate to facilitate the LIBOR to SOFR transition and provide sufficient lead time for entities to prepare for changes to interest rate risk hedging strategies for both risk management and hedge accounting purposes. The Update is applied prospectively for qualifying new or re-designated hedging relationships entered into on or after adoption date.

We adopted the guidance in first quarter 2019. The adoption did not have an impact as we did not designate SOFR OIS as a benchmark interest rate in any hedging relationships.

ASU 2017-08 changes the interest income recognition model for purchased callable debt securities carried at a premium, as the premium will be amortized to the earliest call date rather than to the contractual maturity date. Accounting for purchased callable debt securities held at a discount does not change, as the discount will continue to accrete to the contractual maturity date. The Update impacted our investments in purchased callable debt securities classified as available-for-sale (AFS) and held-to-maturity (HTM), which primarily consist of debt securities of U.S. states and political subdivisions.

We adopted the Update in first quarter 2019 and recorded a cumulative-effect adjustment as of January 1, 2019, that decreased total stockholders' equity by $111 million. Retained earnings was reduced by $592 million which reflects both the incremental premium amortization under the new guidance from the acquisition date of our impacted AFS and HTM debt securities through the date of adoption and the fact that the incremental premium amortization is not deductible for federal income tax purposes. Other comprehensive income (OCI) was increased by $481 million which reflects the corresponding adjustment to the adoption date unrealized gain or loss of impacted AFS debt securities. Going forward, interest income recognized prior to the call date will be reduced because the premium will be amortized over a shorter period.

ASU 2016-02 modifies the guidance used by lessors and lessees to account for leasing transactions. For our transition to the new guidance, we elected several available practical expedients, including to not reassess the classification of our existing leases, any initial direct costs associated with our leases, or whether any existing contracts are or contain leases. In addition, we elected not to provide a comparative presentation for 2018 and 2017 financial statements.

We adopted the Update in first quarter 2019 and recorded a cumulative-effect adjustment that increased retained earnings by $100 million related to deferred gains on our prior sale-leaseback transactions. We also recognized operating lease right-of-use

(ROU) assets and liabilities, substantially all of which relate to our leasing of real estate as a lessee, of $4.9 billion and $5.6 billion, respectively.

Leasing Activity

AS LESSOR We lease equipment to our customers under financing or operating leases.

Financing leases are presented in loans and are recorded at the discounted amounts of lease payments receivable plus the estimated residual value of the leased asset. Leveraged leases, which are a form of financing leases, are reduced by related non-recourse debt from third-party investors. Lease payments receivable reflect contractual lease payments adjusted for renewal or termination options that we believe the customer is reasonably certain to exercise. The residual value reflects our best estimate of the expected sales price for the equipment at lease termination based on sales history adjusted for recent trends in the expected exit markets. Many of our leases allow the customer to extend the lease at prevailing market terms or purchase the asset for fair value at lease termination.

Our allowance for loan losses for financing leases considers both the collectability of the lease payments receivable as well as the estimated residual value of the leased asset. We typically purchase residual value insurance on our financing leases so that our risk of loss at lease termination will be less than 10% of the initial value of the lease. Our risk to declines in residual values is further mitigated by the diversity of leased assets in our lease portfolio. In addition, we have several channels for re-leasing or marketing those assets.

In connection with a lease, we may finance the customer's purchase of other products or services from the equipment vendor and allocate the contract consideration between the use of the asset and the purchase of those products or services based on information obtained from the vendor. Amounts allocated to financing of vendor products or services are reported in loans as commercial and industrial loans, rather than as lease financing.

Our primary income from financing leases is interest income recognized using the effective interest method. Variable lease revenues, such as reimbursement for property taxes associated with the leased asset, are included in lease income within noninterest income.

Operating lease assets are presented in other assets, net of accumulated depreciation. Periodic depreciation expense is recorded on a straight-line basis to the estimated residual value over the estimated useful life of the leased asset. On a periodic basis, operating lease assets are reviewed for impairment and impairment loss is recognized if the carrying amount of operating lease assets exceeds fair value and is not recoverable. The carrying amount of leased assets is deemed not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the lease payments and the estimated residual value upon the eventual disposition of the equipment. Depreciation of leased assets and impairment loss are presented in operating leases expense within other noninterest expense.

Operating lease rental income for leased assets is recognized in lease income within noninterest income on a straight-line basis over the lease term. For leases of railcars, revenue for maintenance services provided under the lease is recognized in lease income.

We elected to exclude from revenues and expenses any sales tax incurred on lease payments which are reimbursed by the lessee. Substantially all of our leased assets are protected against casualty loss through third party insurance.

AS LESSEE We enter into lease agreements to obtain the right to use assets for our business operations, substantially all of which are real estate. Lease liabilities and ROU assets are recognized when we enter into operating or financing leases and represent our obligations and rights to use these assets over the period of the leases and may be re-measured for certain modifications, resolution of certain contingencies involving variable consideration, or our exercise of options (renewal, extension, or termination) under the lease.

Operating lease liabilities include fixed and in-substance fixed payments for the contractual duration of the lease, adjusted for renewals or terminations which were deemed probable of exercise when measured. The lease payments are discounted using a rate determined when the lease is recognized. As we typically do not know the discount rate implicit in the lease, we estimate a discount rate that we believe approximates a collateralized borrowing rate for the estimated duration of the lease. The discount rate is updated when re-measurement events occur. The related operating lease ROU assets may differ from operating lease liabilities due to initial direct costs, deferred or prepaid lease payments and lease incentives.

We present operating lease liabilities in accrued expenses and other liabilities and the related operating lease ROU assets in other assets. The amortization of operating lease ROU assets and the accretion of operating lease liabilities are reported together as fixed lease expense and are included in net occupancy expense within noninterest expense. The fixed lease expense is recognized on a straight-line basis over the life of the lease.

Some of our operating leases include variable lease payments which are periodic adjustments of our payments for the use of the asset based on changes in factors such as consumer price indices, fair market value, tax rates imposed by taxing authorities, or lessor cost of insurance. To the extent not included in operating lease liabilities and operating lease ROU assets, these variable lease payments are recognized as incurred in net occupancy expense within noninterest expense.

For substantially all of our leased assets, we account for consideration paid under the contract for maintenance or other services as lease payments. In addition, for certain asset classes, we have elected to exclude leases with original terms of less than one year from the operating lease ROU assets and lease liabilities. The related short-term lease expense is included in net occupancy expense.

Finance lease (formerly capital lease) liabilities are presented in long-term debt and the associated finance ROU assets are presented in premises and equipment.

Share Repurchases

From time to time we may enter into private forward repurchase contracts, written repurchase plans pursuant to Rule 10b5-1 of the Securities Exchange Act of 1934, or a combination of the two to complement our open-market common stock repurchase strategies. The stock repurchase transactions allow us to manage our share repurchases in a manner consistent with our capital plans submitted annually under the Comprehensive Capital Analysis and Review (CCAR) and to provide an economic benefit to the Company.

Our payments to the counterparties for the private forward repurchase contracts are recorded in permanent equity in the quarter paid and are not subject to re-measurement. The classification of the up-front payments as permanent equity assures that we have appropriate repurchase timing consistent with our capital plans, which contemplate a fixed dollar amount available per quarter for share repurchases pursuant to the Board of Governors of the Federal Reserve System (FRB) supervisory guidance. In return, the counterparty agrees to deliver a variable number of shares based on a per share discount to the volume-weighted average stock price over the contract period. There are no scenarios where the contracts would not either physically settle in shares or allow us to choose the settlement method. Our total number of outstanding shares of common stock is not reduced until settlement of the private share repurchase contract.

We did not enter into any private forward repurchase contracts in second quarter 2019 and we had no unsettled private share repurchase contracts at June 30, 2019.

Under a Rule 10b5-1 repurchase plan, payments and receipt of repurchased shares settle on the same day and the shares repurchased reduce the total number of outstanding shares of common stock upon the settlement of each trade under the plan.

Supplemental Cash Flow Information

Significant noncash activities are presented in Table 1.1.

Table 1.1: Supplemental Cash Flow Information

	Six months ended June 30,	
(in millions)	**2019**	2018
Trading debt securities retained from securitization of MLHFS	**$ 19,131**	17,674
Transfers from loans to MLHFS	**4,419**	3,053
Transfers from loans to LHFS	**92**	2,149
Transfers from available-for-sale debt securities to held-to-maturity debt securities	**6,071**	10,371
Operating lease ROU assets acquired with operating lease liabilities (1)	**5,302**	—

(1) The six months ended June 30, 2019, balance includes $4.9 billion from adoption of ASU 2016-02 – Leases (Topic 842) and $402 million attributable to new leases and changes from modified leases.

Subsequent Events

We have evaluated the effects of events that have occurred subsequent to June 30, 2019, and, except as disclosed elsewhere in the footnotes, there have been no material events that would require recognition in our second quarter 2019 consolidated financial statements or disclosure in the Notes to the consolidated financial statements.

Note 2: Business Combinations

We regularly explore opportunities to acquire financial services companies and businesses. Generally, we do not make a public announcement about an acquisition opportunity until a definitive agreement has been signed.

We completed no acquisitions during the first half of 2019 and had no business combinations pending as of June 30, 2019.

We closed the previously announced sale of our Institutional Retirement and Trust business (IRT) on July 1, 2019, and we recognized a pre-tax gain of approximately $1.1 billion, which will be reflected in our third quarter 2019 net income. We will continue to administer client assets at the direction of the buyer for up to 24 months pursuant to a transition services agreement. The buyer will receive all post-closing revenue from the client assets and will pay us a fee for costs that we incur to administer the client assets during the transition period. The transition services fee will be recognized as other noninterest income. Assets under administration related to IRT were $918 billion at June 30, 2019. Transition period revenue, is expected to approximate transition period expenses and is subject to downward adjustment as client assets transition to the buyer's platform.

Note 3: Cash, Loan and Dividend Restrictions

Cash and cash equivalents may be restricted as to usage or withdrawal. FRB regulations require that each of our subsidiary banks maintain reserve balances on deposit with the Federal Reserve Banks. Table 3.1 provides a summary of restrictions on cash equivalents in addition to the FRB reserve cash balance requirements.

Table 3.1: Nature of Restrictions on Cash Equivalents

(in millions)		Jun 30, 2019	Dec 31, 2018
Average required reserve balance for FRB (1)	$	**11,179**	12,428
Reserve balance for non-U.S. central banks		**556**	517
Segregated for benefit of brokerage customers under federal and other brokerage regulations		**956**	1,135
Related to consolidated variable interest entities (VIEs) that can only be used to settle liabilities of VIEs		**19**	147

(1) FRB required reserve balance represents average for the first half of 2019 and for the year ended December 31, 2018.

We have a state-chartered subsidiary bank that is subject to state regulations that limit dividends. Under these provisions and regulatory limitations, our national and state-chartered subsidiary banks could have declared additional dividends of $7.6 billion at June 30, 2019, without obtaining prior regulatory approval. Our nonbank subsidiaries are also limited by certain federal and state statutory provisions and regulations covering the amount of dividends that may be paid in any given year. In addition, under a Support Agreement dated June 28, 2017, as amended and restated on June 26, 2019, among Wells Fargo & Company, the parent holding company (the "Parent"), WFC Holdings, LLC, an intermediate holding company and subsidiary of the Parent (the "IHC"), Wells Fargo Bank, N.A., Wells Fargo Securities, LLC, Wells Fargo Clearing Services, LLC, and certain other direct and indirect subsidiaries of the Parent designated as material entities for resolution planning purposes or identified as related support entities in our resolution plan, the IHC may be restricted from making dividend payments to the Parent if certain liquidity and/or capital metrics fall below defined triggers or if the Parent's board of directors authorizes it to file a case under the U.S. Bankruptcy Code. Based on retained earnings at June 30, 2019, our nonbank subsidiaries could have declared additional dividends of $25.1 billion at June 30, 2019, without obtaining prior regulatory approval. For additional information see Note 3 (Cash, Loan and Dividend Restrictions) in our 2018 Form 10-K.

The FRB's Capital Plan Rule (codified at 12 CFR 225.8 of Regulation Y) establishes capital planning and prior notice and approval requirements for capital distributions including dividends by certain large bank holding companies. The FRB has also published guidance regarding its supervisory expectations for capital planning, including capital policies regarding the process relating to common stock dividend and repurchase decisions in the FRB's SR Letter 15-18. The effect of this guidance is to require the approval of the FRB (or specifically under the Capital Plan Rule, a notice of non-objection) for the Company to repurchase or redeem common or perpetual preferred stock as well as to raise the per share quarterly dividend from its current level of $0.51 per share as declared by the Company's Board of Directors on July 23, 2019, payable on September 1, 2019.

Note 4: Trading Activities

Table 4.1 presents a summary of our trading assets and liabilities measured at fair value through earnings.

Table 4.1: Trading Assets and Liabilities

(in millions)		Jun 30, 2019	Dec 31, 2018
Trading assets:			
Debt securities	$	**70,208**	69,989
Equity securities		**23,327**	19,449
Loans held for sale		**1,118**	1,469
Gross trading derivative assets		**34,683**	29,216
Netting (1)		**(22,827)**	(19,807)
Total trading derivative assets		**11,856**	9,409
Total trading assets		**106,509**	100,316
Trading liabilities:			
Short sale		**15,955**	19,720
Gross trading derivative liabilities		**33,458**	28,717
Netting (1)		**(26,417)**	(21,178)
Total trading derivative liabilities		**7,041**	7,539
Total trading liabilities	$	**22,996**	27,259

(1) Represents balance sheet netting for trading derivative asset and liability balances, and trading portfolio level counterparty valuation adjustments.

Table 4.2 provides a summary of the net interest income earned from trading securities, and net gains and losses due to the realized and unrealized gains and losses from trading activities.

Net interest income includes dividend income on trading securities and dividend expense on trading securities we have sold, but not yet purchased.

Table 4.2: Net Interest Income and Net Gains (Losses) on Trading Activities

		Quarter ended June 30,		Six months ended June 30,	
(in millions)		**2019**	2018	**2019**	2018
Interest income:					
Debt securities	$	**740**	689	**1,533**	1,320
Equity securities		**143**	128	**258**	269
Loans held for sale		**20**	15	**43**	23
Total interest income		**903**	832	**1,834**	1,612
Less: Interest expense		**127**	144	**263**	272
Net interest income		**776**	688	**1,571**	1,340
Net gains (losses) from trading activities (1):					
Debt securities		**401**	(140)	**1,089**	(639)
Equity securities		**1,236**	(635)	**3,303**	(1,104)
Loans held for sale		**(4)**	7	**10**	15
Derivatives (2)		**(1,404)**	959	**(3,816)**	2,162
Total net gains from trading activities		**229**	191	**586**	434
Total trading-related net interest and noninterest income	$	**1,005**	879	**2,157**	1,774

(1) Represents realized gains (losses) and unrealized gains (losses) due to changes in fair value of our trading positions.
(2) Excludes economic hedging of mortgage banking and asset/liability management activities, for which hedge results (realized and unrealized) are reported with the respective hedged activities.

Note 5: Available-for-Sale and Held-to-Maturity Debt Securities

Table 5.1 provides the amortized cost and fair value by major categories of available-for-sale debt securities, which are carried at fair value, and held-to-maturity debt securities, which are carried at amortized cost. The net unrealized gains (losses) for available-for-sale debt securities are reported on an after-tax basis as a component of cumulative OCI. Information on debt securities held for trading is included in Note 4 (Trading Activities).

Table 5.1: Amortized Cost and Fair Value

(in millions)	Amortized Cost	Gross unrealized gains	Gross unrealized losses	Fair value
June 30, 2019				
Available-for-sale debt securities:				
Securities of U.S. Treasury and federal agencies	**$ 15,334**	**2**	**(17)**	**15,319**
Securities of U.S. states and political subdivisions (1)	**44,205**	**968**	**(78)**	**45,095**
Mortgage-backed securities:				
Federal agencies	**154,549**	**1,617**	**(308)**	**155,858**
Residential	**1,241**	**23**	**(1)**	**1,263**
Commercial	**4,140**	**45**	**(5)**	**4,180**
Total mortgage-backed securities	**159,930**	**1,685**	**(314)**	**161,301**
Corporate debt securities	**6,058**	**208**	**(36)**	**6,230**
Collateralized loan and other debt obligations (2)	**32,944**	**165**	**(114)**	**32,995**
Other (3)	**4,987**	**70**	**(14)**	**5,043**
Total available-for-sale debt securities	**263,458**	**3,098**	**(573)**	**265,983**
Held-to-maturity debt securities:				
Securities of U.S. Treasury and federal agencies	**44,766**	**574**	**(4)**	**45,336**
Securities of U.S. states and political subdivisions	**7,948**	**182**	**(5)**	**8,125**
Federal agency and other mortgage-backed securities (4)	**93,105**	**1,312**	**(71)**	**94,346**
Collateralized loan obligations	**57**	**—**	**—**	**57**
Total held-to-maturity debt securities	**145,876**	**2,068**	**(80)**	**147,864**
Total	**$ 409,334**	**5,166**	**(653)**	**413,847**
December 31, 2018				
Available-for-sale debt securities:				
Securities of U.S. Treasury and federal agencies	$ 13,451	3	(106)	13,348
Securities of U.S. states and political subdivisions (1)	48,994	716	(446)	49,264
Mortgage-backed securities:				
Federal agencies	155,974	369	(3,140)	153,203
Residential	2,638	142	(5)	2,775
Commercial	4,207	40	(22)	4,225
Total mortgage-backed securities	162,819	551	(3,167)	160,203
Corporate debt securities	6,230	131	(90)	6,271
Collateralized loan and other debt obligations (2)	35,581	158	(396)	35,343
Other (3)	5,396	100	(13)	5,483
Total available-for-sale debt securities	272,471	1,659	(4,218)	269,912
Held-to-maturity debt securities:				
Securities of U.S. Treasury and federal agencies	44,751	4	(415)	44,340
Securities of U.S. states and political subdivisions	6,286	30	(116)	6,200
Federal agency and other mortgage-backed securities (4)	93,685	112	(2,288)	91,509
Collateralized loan obligations	66	—	—	66
Total held-to-maturity debt securities	144,788	146	(2,819)	142,115
Total	$ 417,259	1,805	(7,037)	412,027

(1) Includes investments in tax-exempt preferred debt securities issued by investment funds or trusts that predominantly invest in tax-exempt municipal securities. The cost basis and fair value of these types of securities was $5.8 billion each at June 30, 2019, and $6.3 billion each at December 31, 2018.
(2) Includes collateralized debt obligations (CDOs) with a cost basis and fair value of $521 million and $649 million, respectively, at June 30, 2019, and $662 million and $800 million, respectively, at December 31, 2018.
(3) Largely includes asset-backed securities collateralized by student loans.
(4) Predominantly consists of federal agency mortgage-backed securities at both June 30, 2019 and December 31, 2018.

Gross Unrealized Losses and Fair Value

Table 5.2 shows the gross unrealized losses and fair value of available-for-sale and held-to-maturity debt securities by length of time those individual securities in each category have been in a continuous loss position. Debt securities on which we have taken credit-related other-than-temporary impairment (OTTI) write-downs are categorized as being "less than 12 months" or "12 months or more" in a continuous loss position based on the point in time that the fair value declined to below the cost basis and not the period of time since the credit-related OTTI write-down.

Table 5.2: Gross Unrealized Losses and Fair Value

		Less than 12 months		12 months or more		Total	
(in millions)		Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value
June 30, 2019							
Available-for-sale debt securities:							
Securities of U.S. Treasury and federal agencies	$	(2)	5,780	(15)	5,511	(17)	11,291
Securities of U.S. states and political subdivisions		(32)	5,003	(46)	2,696	(78)	7,699
Mortgage-backed securities:							
Federal agencies		(2)	1,203	(306)	32,179	(308)	33,382
Residential		(1)	180	—	—	(1)	180
Commercial		(3)	837	(2)	89	(5)	926
Total mortgage-backed securities		(6)	2,220	(308)	32,268	(314)	34,488
Corporate debt securities		(11)	470	(25)	281	(36)	751
Collateralized loan and other debt obligations		(58)	12,847	(56)	7,239	(114)	20,086
Other		(8)	1,222	(6)	246	(14)	1,468
Total available-for-sale debt securities		(117)	27,542	(456)	48,241	(573)	75,783
Held-to-maturity debt securities:							
Securities of U.S. Treasury and federal agencies		—	—	(4)	1,613	(4)	1,613
Securities of U.S. states and political subdivisions		—	—	(5)	514	(5)	514
Federal agency and other mortgage-backed securities		(1)	15	(70)	17,392	(71)	17,407
Collateralized loan obligations		—	—	—	—	—	—
Total held-to-maturity debt securities		(1)	15	(79)	19,519	(80)	19,534
Total	$	(118)	27,557	(535)	67,760	(653)	95,317
December 31, 2018							
Available-for-sale debt securities:							
Securities of U.S. Treasury and federal agencies	$	(1)	498	(105)	6,204	(106)	6,702
Securities of U.S. states and political subdivisions		(73)	9,746	(373)	9,017	(446)	18,763
Mortgage-backed securities:							
Federal agencies		(42)	10,979	(3,098)	112,252	(3,140)	123,231
Residential		(3)	398	(2)	69	(5)	467
Commercial		(20)	1,972	(2)	79	(22)	2,051
Total mortgage-backed securities		(65)	13,349	(3,102)	112,400	(3,167)	125,749
Corporate debt securities		(64)	1,965	(26)	298	(90)	2,263
Collateralized loan and other debt obligations		(388)	28,306	(8)	553	(396)	28,859
Other		(7)	819	(6)	159	(13)	978
Total available-for-sale debt securities		(598)	54,683	(3,620)	128,631	(4,218)	183,314
Held-to-maturity debt securities:							
Securities of U.S. Treasury and federal agencies		(3)	895	(412)	41,083	(415)	41,978
Securities of U.S. states and political subdivisions		(4)	598	(112)	3,992	(116)	4,590
Federal agency and other mortgage-backed securities		(5)	4,635	(2,283)	77,741	(2,288)	82,376
Collateralized loan obligations		—	—	—	—	—	—
Total held-to-maturity debt securities		(12)	6,128	(2,807)	122,816	(2,819)	128,944
Total	$	(610)	60,811	(6,427)	251,447	(7,037)	312,258

We have assessed each debt security with gross unrealized losses included in the previous table for credit impairment. As part of that assessment we evaluated and concluded that we do not intend to sell any of the debt securities and that it is more likely than not that we will not be required to sell prior to recovery of the amortized cost basis. We evaluate, where necessary, whether credit impairment exists by comparing the present value of the expected cash flows to the debt securities' amortized cost basis.

For descriptions of the factors we consider when analyzing debt securities for impairment, see Note 1 (Summary of Significant Accounting Policies) and Note 5 (Available-for-Sale and Held-to-Maturity Debt Securities) in our 2018 Form 10-K. There were no material changes to our methodologies for assessing impairment in the first half of 2019.

Table 5.3 shows the gross unrealized losses and fair value of the available-for-sale and held-to-maturity debt securities by those rated investment grade and those rated less than investment grade, according to their lowest credit rating by Standard & Poor's Rating Services (S&P) or Moody's Investors Service (Moody's). Credit ratings express opinions about the credit quality of a debt security. Debt securities rated investment grade, that is those rated BBB- or higher by S&P or Baa3 or higher by Moody's, are generally considered by the rating agencies and market participants to be low credit risk. Conversely, debt securities rated below investment grade, labeled as "speculative grade" by the rating agencies, are considered to be distinctively higher credit risk than investment grade debt securities. We have also included debt securities not rated by S&P or Moody's in the table below based on our internal credit grade of the debt securities (used for credit risk management purposes) equivalent to the credit rating assigned by major credit agencies. The unrealized losses and fair value of unrated debt securities categorized as investment grade based on internal credit grades were $9 million and $2.3 billion, respectively, at June 30, 2019, and $20 million and $5.2 billion, respectively, at December 31, 2018. If an internal credit grade was not assigned, we categorized the debt security as non-investment grade.

Table 5.3: Gross Unrealized Losses and Fair Value by Investment Grade

	Investment grade		Non-investment grade	
(in millions)	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value
June 30, 2019				
Available-for-sale debt securities:				
Securities of U.S. Treasury and federal agencies	**$ (17)**	**11,291**	**—**	**—**
Securities of U.S. states and political subdivisions	**(69)**	**7,480**	**(9)**	**219**
Mortgage-backed securities:				
Federal agencies	**(308)**	**33,382**	**—**	**—**
Residential	**(1)**	**180**	**—**	**—**
Commercial	**(4)**	**915**	**(1)**	**11**
Total mortgage-backed securities	**(313)**	**34,477**	**(1)**	**11**
Corporate debt securities	**(6)**	**299**	**(30)**	**452**
Collateralized loan and other debt obligations	**(114)**	**20,086**	**—**	**—**
Other	**(8)**	**1,120**	**(6)**	**348**
Total available-for-sale debt securities	**(527)**	**74,753**	**(46)**	**1,030**
Held-to-maturity debt securities:				
Securities of U.S. Treasury and federal agencies	**(4)**	**1,613**	**—**	**—**
Securities of U.S. states and political subdivisions	**(5)**	**514**	**—**	**—**
Federal agency and other mortgage-backed securities	**(70)**	**17,374**	**(1)**	**33**
Collateralized loan obligations	**—**	**—**	**—**	**—**
Total held-to-maturity debt securities	**(79)**	**19,501**	**(1)**	**33**
Total	**$ (606)**	**94,254**	**(47)**	**1,063**
December 31, 2018				
Available-for-sale debt securities:				
Securities of U.S. Treasury and federal agencies	$ (106)	6,702	—	—
Securities of U.S. states and political subdivisions	(425)	18,447	(21)	316
Mortgage-backed securities:				
Federal agencies	(3,140)	123,231	—	—
Residential	(2)	295	(3)	172
Commercial	(20)	1,999	(2)	52
Total mortgage-backed securities	(3,162)	125,525	(5)	224
Corporate debt securities	(17)	791	(73)	1,472
Collateralized loan and other debt obligations	(396)	28,859	—	—
Other	(7)	726	(6)	252
Total available-for-sale debt securities	(4,113)	181,050	(105)	2,264
Held-to-maturity debt securities:				
Securities of U.S. Treasury and federal agencies	(415)	41,978	—	—
Securities of U.S. states and political subdivisions	(116)	4,590	—	—
Federal agency and other mortgage-backed securities	(2,278)	81,977	(10)	399
Collateralized loan obligations	—	—	—	—
Total held-to-maturity debt securities	(2,809)	128,545	(10)	399
Total	$ (6,922)	309,595	(115)	2,663

Contractual Maturities

Table 5.4 shows the fair value and contractual weighted-average yields (taxable-equivalent basis) of available-for-sale debt securities by contractual maturity. The remaining contractual principal maturities for mortgage-backed securities (MBS) do not consider prepayments. Remaining expected maturities will differ from contractual maturities because borrowers may have the right to prepay obligations before the underlying mortgages mature.

Table 5.4: Available-for Sale Debt Securities - Fair Value by Contractual Maturity

			Remaining contractual maturity							
	Total		Within one year		After one year through five years		After five years through ten years		After ten years	
(in millions)	amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
June 30, 2019										
Available-for-sale debt securities (1):										
Fair value:										
Securities of U.S. Treasury and federal agencies	$ 15,319	1.94%	$ 5,521	1.69%	$ 9,747	2.08%	$ 51	1.89%	$ —	—%
Securities of U.S. states and political subdivisions	45,095	4.92	2,016	3.34	5,135	3.34	4,322	3.54	33,622	5.40
Mortgage-backed securities:										
Federal agencies	155,858	3.50	—	—	137	3.48	1,665	2.56	154,056	3.51
Residential	1,263	2.80	—	—	—	—	—	—	1,263	2.80
Commercial	4,180	3.71	—	—	—	—	342	3.61	3,838	3.72
Total mortgage-backed securities	161,301	3.50	—	—	137	3.48	2,007	2.74	159,157	3.51
Corporate debt securities	6,230	5.01	484	6.17	2,384	5.00	2,737	4.69	625	5.59
Collateralized loan and other debt obligations	32,995	3.96	—	—	8	5.02	10,005	4.03	22,982	3.93
Other	5,043	3.10	12	3.34	749	3.80	1,424	2.13	2,858	3.40
Total available-for-sale debt securities at fair value	$ 265,983	3.73%	$ 8,033	2.38%	$ 18,160	2.96%	$ 20,546	3.75%	$ 219,244	3.85%

(1) Weighted-average yields displayed by maturity bucket are weighted based on fair value and predominantly represent contractual coupon rates without effect for any related hedging derivatives.

Table 5.5 shows the amortized cost and weighted-average yields of held-to-maturity debt securities by contractual maturity.

Table 5.5: Held-to-Maturity Debt Securities - Amortized Cost by Contractual Maturity

			Remaining contractual maturity							
	Total		Within one year		After one year through five years		After five years through ten years		After ten years	
(in millions)	amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
June 30, 2019										
Held-to-maturity debt securities (1):										
Amortized cost:										
Securities of U.S. Treasury and federal agencies	$ 44,766	2.12%	$ —	—%	$ 34,667	2.07%	$ 10,099	2.28%	$ —	—%
Securities of U.S. states and political subdivisions	7,948	4.97	—	—	75	6.05	1,570	4.89	6,303	4.98
Federal agency and other mortgage-backed securities	93,105	3.12	—	—	15	3.77	—	—	93,090	3.12
Collateralized loan obligations	57	3.78	—	—	—	—	57	3.78	—	—
Total held-to-maturity debt securities at amortized cost	$ 145,876	2.91%	$ —	—%	$ 34,757	2.08%	$ 11,726	2.64%	$ 99,393	3.24%

(1) Weighted-average yields displayed by maturity bucket are weighted based on amortized cost and predominantly represent contractual coupon rates.

Table 5.6 shows the fair value of held-to-maturity debt securities by contractual maturity.

Table 5.6: Held-to-Maturity Debt Securities - Fair Value by Contractual Maturity

		Remaining contractual maturity			
	Total	Within one year	After one year through five years	After five years through ten years	After ten years
(in millions)	amount	Amount	Amount	Amount	Amount
June 30, 2019					
Held-to-maturity debt securities:					
Fair value:					
Securities of U.S. Treasury and federal agencies	$ 45,336	—	34,962	10,374	—
Securities of U.S. states and political subdivisions	8,125	—	75	1,625	6,425
Federal agency and other mortgage-backed securities	94,346	—	15	—	94,331
Collateralized loan obligations	57	—	—	57	—
Total held-to-maturity debt securities at fair value	$ 147,864	—	35,052	12,056	100,756

Realized Gains and Losses

Table 5.7 shows the gross realized gains and losses on sales and OTTI write-downs related to available-for-sale debt securities.

Table 5.7: Realized Gains and Losses

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Gross realized gains	$ **29**	53	**202**	74
Gross realized losses	**(2)**	(4)	**(5)**	(14)
OTTI write-downs	**(7)**	(8)	**(52)**	(18)
Net realized gains from available-for-sale debt securities	$ **20**	41	**145**	42

Other-Than-Temporarily Impaired Debt Securities

Table 5.8 shows the detail of total OTTI write-downs included in earnings for available-for-sale debt securities. There were no OTTI write-downs on held-to-maturity debt securities during the first half of 2019 and 2018.

Table 5.8: Detail of OTTI Write-downs

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Debt securities OTTI write-downs included in earnings:				
Securities of U.S. states and political subdivisions	$ **4**	—	**33**	2
Mortgage-backed securities:				
Residential	**—**	1	**—**	2
Commercial	**3**	7	**17**	14
Corporate debt securities	**—**	—	**2**	—
Total debt securities OTTI write-downs included in earnings	$ **7**	8	**52**	18

Table 5.9 shows the detail of OTTI write-downs on available-for-sale debt securities included in earnings and the related changes in OCI for the same securities.

Table 5.9: OTTI Write-downs Included in Earnings and the Related Changes in OCI

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
OTTI on debt securities				
Recorded as part of gross realized losses:				
Credit-related OTTI	$ **7**	8	**23**	17
Intent-to-sell OTTI	**—**	—	**29**	1
Total recorded as part of gross realized losses	**7**	8	**52**	18
Changes to OCI for losses (reversal of losses) in non-credit-related OTTI (1):				
Securities of U.S. states and political subdivisions	**(1)**	—	**(1)**	(2)
Residential mortgage-backed securities	**—**	—	**(1)**	(1)
Commercial mortgage-backed securities	**—**	(11)	**1**	(1)
Total changes to OCI for non-credit-related OTTI	**(1)**	(11)	**(1)**	(4)
Total OTTI losses recorded on debt securities	$ **6**	(3)	**51**	14

(1) Represents amounts recorded to OCI for impairment of debt securities, due to factors other than credit, that have also had credit-related OTTI write-downs during the period. Increases represent initial or subsequent non-credit-related OTTI on debt securities. Decreases represent partial to full reversal of impairment due to recoveries in the fair value of debt securities due to non-credit factors.

Table 5.10 presents a rollforward of the OTTI credit loss that has been recognized in earnings as a write-down of available-for-sale debt securities we still own (referred to as "credit-impaired" debt securities) and do not intend to sell. Recognized credit loss represents the difference between the present value of expected future cash flows discounted using the security's current effective interest rate and the amortized cost basis of the security prior to considering credit loss.

Table 5.10: Rollforward of OTTI Credit Loss

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Credit loss recognized, beginning of period	**$ 232**	649	**562**	742
Additions:				
For securities with initial credit impairments	**4**	—	**6**	—
For securities with previous credit impairments	**3**	8	**17**	17
Total additions	**7**	8	**23**	17
Reductions:				
For securities sold, matured, or intended/required to be sold	**(23)**	(30)	**(369)**	(131)
For recoveries of previous credit impairments (1)	**—**	(1)	**—**	(2)
Total reductions	**(23)**	(31)	**(369)**	(133)
Credit loss recognized, end of period	**$ 216**	626	**216**	626

(1) Recoveries of previous credit impairments result from increases in expected cash flows subsequent to credit loss recognition. Such recoveries are reflected prospectively as interest yield adjustments using the effective interest method.

Note 6: Loans and Allowance for Credit Losses

Table 6.1 presents total loans outstanding by portfolio segment and class of financing receivable. Outstanding balances include unearned income, net deferred loan fees or costs, and unamortized discounts and premiums. These amounts were less than 1% of our total loans outstanding at June 30, 2019 and December 31, 2018.

Table 6.1: Loans Outstanding

(in millions)		Jun 30, 2019	Dec 31, 2018
Commercial:			
Commercial and industrial	$	**348,846**	350,199
Real estate mortgage		**123,008**	121,014
Real estate construction		**21,067**	22,496
Lease financing		**19,324**	19,696
Total commercial		**512,245**	513,405
Consumer:			
Real estate 1-4 family first mortgage		**286,427**	285,065
Real estate 1-4 family junior lien mortgage		**32,068**	34,398
Credit card		**38,820**	39,025
Automobile		**45,664**	45,069
Other revolving credit and installment		**34,654**	36,148
Total consumer		**437,633**	439,705
Total loans	$	**949,878**	953,110

Our foreign loans are reported by respective class of financing receivable in the table above. Substantially all of our foreign loan portfolio is commercial loans. Loans are classified as foreign primarily based on whether the borrower's primary address is outside of the United States. Table 6.2 presents total commercial foreign loans outstanding by class of financing receivable.

Table 6.2: Commercial Foreign Loans Outstanding

(in millions)		Jun 30, 2019	Dec 31, 2018
Commercial foreign loans:			
Commercial and industrial	$	**63,296**	62,564
Real estate mortgage		**6,801**	6,731
Real estate construction		**1,287**	1,011
Lease financing		**1,215**	1,159
Total commercial foreign loans	$	**72,599**	71,465

Loan Purchases, Sales, and Transfers

Table 6.3 summarizes the proceeds paid or received for purchases and sales of loans and transfers from loans held for investment to mortgages/loans held for sale at lower of cost or fair value. This loan activity also includes participating interests, whereby we receive or transfer a portion of a loan. The table excludes PCI loans, loans for which we have elected the fair value option, and government insured/ guaranteed real estate 1-4 family first mortgage loans because their loan activity normally does not impact the allowance for credit losses.

Table 6.3: Loan Purchases, Sales, and Transfers

		2019			2018	
(in millions)	Commercial	Consumer	Total	Commercial	Consumer	Total
Quarter ended June 30,						
Purchases	$ 670	5	675	398	7	405
Sales	(535)	(153)	(688)	(294)	(88)	(382)
Transfers (to) from MLHFS/LHFS	(89)	(1,852)	(1,941)	(100)	(72)	(172)
Six months ended June 30,						
Purchases	$ 999	8	1,007	654	7	661
Sales	(956)	(332)	(1,288)	(754)	(88)	(842)
Transfers (to) from MLHFS/LHFS	(92)	(1,852)	(1,944)	(520)	(1,625)	(2,145)

Commitments to Lend

A commitment to lend is a legally binding agreement to lend funds to a customer, usually at a stated interest rate, if funded, and for specific purposes and time periods. We generally require a fee to extend such commitments. Certain commitments are subject to loan agreements with covenants regarding the financial performance of the customer or borrowing base formulas on an ongoing basis that must be met before we are required to fund the commitment. We may reduce or cancel consumer commitments, including home equity lines and credit card lines, in accordance with the contracts and applicable law.

We may, as a representative for other lenders, advance funds or provide for the issuance of letters of credit under syndicated loan or letter of credit agreements. Any advances are generally repaid in less than a week and would normally require default of both the customer and another lender to expose us to loss. The unfunded amount of these temporary advance arrangements totaled approximately $94 billion and $91 billion at June 30, 2019 and December 31, 2018, respectively.

We issue commercial letters of credit to assist customers in purchasing goods or services, typically for international trade. At June 30, 2019, and December 31, 2018, we had $1.0 billion and $919 million, respectively, of outstanding issued commercial letters of credit. We also originate multipurpose lending commitments under which borrowers have the option to draw on the facility for different purposes in one of several forms, including a standby letter of credit. See Note 13 (Guarantees, Pledged Assets and Collateral, and Other Commitments) for additional information on standby letters of credit.

When we make commitments, we are exposed to credit risk. The maximum credit risk for these commitments will generally be lower than the contractual amount because a significant portion of these commitments is expected to expire without being used by the customer. In addition, we manage the potential risk in commitments to lend by limiting the total amount of commitments, both by individual customer and in total, by monitoring the size and maturity structure of these commitments and by applying the same credit standards for these commitments as for all of our credit activities.

For loans and commitments to lend, we generally require collateral or a guarantee. We may require various types of collateral, including commercial and consumer real estate, automobiles, other short-term liquid assets such as accounts receivable or inventory and long-lived assets, such as equipment and other business assets. Collateral requirements for each loan or commitment may vary based on the loan product and our assessment of a customer's credit risk according to the specific credit underwriting, including credit terms and structure.

The contractual amount of our unfunded credit commitments, including unissued standby and commercial letters of credit, is summarized by portfolio segment and class of financing receivable in Table 6.4. The table excludes the issued standby and commercial letters of credit and temporary advance arrangements described above.

Table 6.4: Unfunded Credit Commitments

(in millions)	Jun 30, 2019	Dec 31, 2018
Commercial:		
Commercial and industrial	$ 329,751	330,492
Real estate mortgage	7,905	6,984
Real estate construction	15,459	16,400
Total commercial	353,115	353,876
Consumer:		
Real estate 1-4 family first mortgage	43,427	29,736
Real estate 1-4 family junior lien mortgage	37,454	37,719
Credit card	113,306	109,840
Other revolving credit and installment	26,676	27,530
Total consumer	220,863	204,825
Total unfunded credit commitments	$ 573,978	558,701

Allowance for Credit Losses

Table 6.5 presents the allowance for credit losses, which consists of the allowance for loan losses and the allowance for unfunded credit commitments.

Table 6.5: Allowance for Credit Losses

		Quarter ended June 30,		Six months ended June 30,	
(in millions)		**2019**	2018	**2019**	2018
Balance, beginning of period	**$**	**10,821**	11,313	**10,707**	11,960
Provision for credit losses		**503**	452	**1,348**	643
Interest income on certain impaired loans (1)		**(39)**	(43)	**(78)**	(86)
Loan charge-offs:					
Commercial:					
Commercial and industrial		**(205)**	(134)	**(381)**	(298)
Real estate mortgage		**(14)**	(19)	**(26)**	(21)
Real estate construction		**—**	—	**(1)**	—
Lease financing		**(12)**	(20)	**(23)**	(37)
Total commercial		**(231)**	(173)	**(431)**	(356)
Consumer:					
Real estate 1-4 family first mortgage		**(27)**	(55)	**(70)**	(96)
Real estate 1-4 family junior lien mortgage		**(29)**	(47)	**(63)**	(94)
Credit card		**(437)**	(404)	**(874)**	(809)
Automobile		**(142)**	(216)	**(329)**	(516)
Other revolving credit and installment		**(167)**	(164)	**(329)**	(344)
Total consumer		**(802)**	(886)	**(1,665)**	(1,859)
Total loan charge-offs		**(1,033)**	(1,059)	**(2,096)**	(2,215)
Loan recoveries:					
Commercial:					
Commercial and industrial		**46**	76	**89**	155
Real estate mortgage		**10**	19	**16**	36
Real estate construction		**2**	6	**5**	10
Lease financing		**8**	5	**11**	10
Total commercial		**66**	106	**121**	211
Consumer:					
Real estate 1-4 family first mortgage		**57**	78	**112**	137
Real estate 1-4 family junior lien mortgage		**48**	60	**91**	115
Credit card		**88**	81	**173**	154
Automobile		**90**	103	**186**	195
Other revolving credit and installment		**31**	29	**65**	60
Total consumer		**314**	351	**627**	661
Total loan recoveries		**380**	457	**748**	872
Net loan charge-offs		**(653)**	(602)	**(1,348)**	(1,343)
Other		**(29)**	(10)	**(26)**	(64)
Balance, end of period	**$**	**10,603**	11,110	**10,603**	11,110
Components:					
Allowance for loan losses	**$**	**9,692**	10,193	**9,692**	10,193
Allowance for unfunded credit commitments		**911**	917	**911**	917
Allowance for credit losses	**$**	**10,603**	11,110	**10,603**	11,110
Net loan charge-offs (annualized) as a percentage of average total loans		**0.28%**	0.26	**0.29**	0.29
Allowance for loan losses as a percentage of total loans		**1.02**	1.08	**1.02**	1.08
Allowance for credit losses as a percentage of total loans		**1.12**	1.18	**1.12**	1.18

(1) Certain impaired loans with an allowance calculated by discounting expected cash flows using the loan's effective interest rate over the remaining life of the loan recognize changes in allowance attributable to the passage of time as interest income.

Table 6.6 summarizes the activity in the allowance for credit losses by our commercial and consumer portfolio segments.

Table 6.6: Allowance Activity by Portfolio Segment

			2019			2018
(in millions)	**Commercial**	**Consumer**	**Total**	Commercial	Consumer	Total
Quarter ended June 30,						
Balance, beginning of period	$ **6,428**	**4,393**	**10,821**	6,708	4,605	11,313
Provision for credit losses	**46**	**457**	**503**	89	363	452
Interest income on certain impaired loans	**(14)**	**(25)**	**(39)**	(14)	(29)	(43)
Loan charge-offs	**(231)**	**(802)**	**(1,033)**	(173)	(886)	(1,059)
Loan recoveries	**66**	**314**	**380**	106	351	457
Net loan charge-offs	**(165)**	**(488)**	**(653)**	(67)	(535)	(602)
Other	**3**	**(32)**	**(29)**	(5)	(5)	(10)
Balance, end of period	$ **6,298**	**4,305**	**10,603**	6,711	4,399	11,110
Six months ended June 30,						
Balance, beginning of period	$ **6,417**	**4,290**	**10,707**	6,632	5,328	11,960
Provision for credit losses	**210**	**1,138**	**1,348**	258	385	643
Interest income on certain impaired loans	**(25)**	**(53)**	**(78)**	(25)	(61)	(86)
Loan charge-offs	**(431)**	**(1,665)**	**(2,096)**	(356)	(1,859)	(2,215)
Loan recoveries	**121**	**627**	**748**	211	661	872
Net loan charge-offs	**(310)**	**(1,038)**	**(1,348)**	(145)	(1,198)	(1,343)
Other	**6**	**(32)**	**(26)**	(9)	(55)	(64)
Balance, end of period	$ **6,298**	**4,305**	**10,603**	6,711	4,399	11,110

Table 6.7 disaggregates our allowance for credit losses and recorded investment in loans by impairment methodology.

Table 6.7: Allowance by Impairment Methodology

		Allowance for credit losses			Recorded investment in loans	
(in millions)	Commercial	Consumer	Total	Commercial	Consumer	Total
June 30, 2019						
Collectively evaluated (1)	$ **5,831**	**3,436**	**9,267**	**508,798**	**425,818**	**934,616**
Individually evaluated (2)	**467**	**869**	**1,336**	**3,447**	**10,641**	**14,088**
PCI (3)	**—**	**—**	**—**	**—**	**1,174**	**1,174**
Total	$ **6,298**	**4,305**	**10,603**	**512,245**	**437,633**	**949,878**
December 31, 2018						
Collectively evaluated (1)	$ 5,903	3,361	9,264	510,180	421,574	931,754
Individually evaluated (2)	514	929	1,443	3,221	13,126	16,347
PCI (3)	—	—	—	4	5,005	5,009
Total	$ 6,417	4,290	10,707	513,405	439,705	953,110

(1) Represents loans collectively evaluated for impairment in accordance with Accounting Standards Codification (ASC) 450-20, *Loss Contingencies*, and pursuant to amendments by ASU 2010-20 regarding allowance for non-impaired loans.
(2) Represents loans individually evaluated for impairment in accordance with ASC 310-10, *Receivables*, and pursuant to amendments by ASU 2010-20 regarding allowance for impaired loans.
(3) Represents the allowance and related loan carrying value determined in accordance with ASC 310-30, *Receivables – Loans and Debt Securities Acquired with Deteriorated Credit Quality* and pursuant to amendments by ASU 2010-20 regarding allowance for PCI loans.

Credit Quality

We monitor credit quality by evaluating various attributes and utilize such information in our evaluation of the appropriateness of the allowance for credit losses. The following sections provide the credit quality indicators we most closely monitor. The credit quality indicators are generally based on information as of our financial statement date, with the exception of updated Fair Isaac Corporation (FICO) scores and updated loan-to-value (LTV)/ combined LTV (CLTV). We obtain FICO scores at loan origination and the scores are generally updated at least quarterly, except in limited circumstances, including compliance with the Fair Credit Reporting Act (FCRA). Generally, the LTV and CLTV indicators are updated in the second month of each quarter, with updates no older than March 31, 2019.

COMMERCIAL CREDIT QUALITY INDICATORS In addition to monitoring commercial loan concentration risk, we manage a consistent process for assessing commercial loan credit quality. Generally, commercial loans are subject to individual risk assessment using our internal borrower and collateral quality ratings. Our ratings are aligned to Pass and Criticized categories. The Criticized category includes Special Mention, Substandard, and Doubtful categories which are defined by bank regulatory agencies.

Table 6.8 provides a breakdown of outstanding commercial loans by risk category. Criticized commercial loans at June 30, 2019, included $2.5 billion on nonaccrual status that have been written down to net realizable value. For additional information on nonaccrual loans, see Table 6.13.

Table 6.8: Commercial Loans by Risk Category

(in millions)		Commercial and industrial	Real estate mortgage	Real estate construction	Lease financing	Total
June 30, 2019						
By risk category:						
Pass	**$**	**334,034**	**118,768**	**20,883**	**18,225**	**491,910**
Criticized		**14,812**	**4,240**	**184**	**1,099**	**20,335**
Total commercial loans (excluding PCI)		**348,846**	**123,008**	**21,067**	**19,324**	**512,245**
Total commercial PCI loans (carrying value)		**—**	**—**	**—**	**—**	**—**
Total commercial loans	**$**	**348,846**	**123,008**	**21,067**	**19,324**	**512,245**
December 31, 2018						
By risk category:						
Pass	$	335,412	116,514	22,207	18,671	492,804
Criticized		14,783	4,500	289	1,025	20,597
Total commercial loans (excluding PCI)		350,195	121,014	22,496	19,696	513,401
Total commercial PCI loans (carrying value)		4	—	—	—	4
Total commercial loans	$	350,199	121,014	22,496	19,696	513,405

Table 6.9 provides past due information for commercial loans, which we monitor as part of our credit risk management practices.

Table 6.9: Commercial Loans by Delinquency Status

(in millions)		Commercial and industrial	Real estate mortgage	Real estate construction	Lease financing	Total
June 30, 2019						
By delinquency status:						
Current-29 days past due (DPD) and still accruing	**$**	**346,688**	**122,101**	**20,854**	**19,101**	**508,744**
30-89 DPD and still accruing		**507**	**146**	**177**	**160**	**990**
90+ DPD and still accruing		**17**	**24**	**—**	**—**	**41**
Nonaccrual loans		**1,634**	**737**	**36**	**63**	**2,470**
Total commercial loans (excluding PCI)		**348,846**	**123,008**	**21,067**	**19,324**	**512,245**
Total commercial PCI loans (carrying value)		**—**	**—**	**—**	**—**	**—**
Total commercial loans	**$**	**348,846**	**123,008**	**21,067**	**19,324**	**512,245**
December 31, 2018						
By delinquency status:						
Current-29 DPD and still accruing	$	348,158	120,176	22,411	19,443	510,188
30-89 DPD and still accruing		508	207	53	163	931
90+ DPD and still accruing		43	51	—	—	94
Nonaccrual loans		1,486	580	32	90	2,188
Total commercial loans (excluding PCI)		350,195	121,014	22,496	19,696	513,401
Total commercial PCI loans (carrying value)		4	—	—	—	4
Total commercial loans	$	350,199	121,014	22,496	19,696	513,405

CONSUMER CREDIT QUALITY INDICATORS We have various classes of consumer loans that present unique risks. Loan delinquency, FICO credit scores and LTV for loan types are common credit quality indicators that we monitor and utilize in our evaluation of the appropriateness of the allowance for credit losses for the consumer portfolio segment.

Many of our loss estimation techniques used for the allowance for credit losses rely on delinquency-based models; therefore, delinquency is an important indicator of credit quality and the establishment of our allowance for credit losses. Table 6.10 provides the outstanding balances of our consumer portfolio by delinquency status.

Table 6.10: Consumer Loans by Delinquency Status

(in millions)	Real estate 1-4 family first mortgage	Real estate 1-4 family junior lien mortgage	Credit card	Automobile	Other revolving credit and installment	Total
June 30, 2019						
By delinquency status:						
Current-29 DPD	**271,144**	**31,374**	**37,925**	**44,554**	**34,383**	**419,380**
30-59 DPD	**1,311**	**250**	**258**	**808**	**97**	**2,724**
60-89 DPD	**436**	**115**	**188**	**232**	**70**	**1,041**
90-119 DPD	**196**	**63**	**152**	**69**	**68**	**548**
120-179 DPD	**177**	**70**	**297**	**1**	**22**	**567**
180+ DPD	**630**	**181**	**—**	**—**	**14**	**825**
Government insured/guaranteed loans (1)	**11,172**	**—**	**—**	**—**	**—**	**11,172**
Loans held at fair value	**202**	**—**	**—**	**—**	**—**	**202**
Total consumer loans (excluding PCI)	**285,268**	**32,053**	**38,820**	**45,664**	**34,654**	**436,459**
Total consumer PCI loans (carrying value) (2)	**1,159**	**15**	**—**	**—**	**—**	**1,174**
Total consumer loans	**286,427**	**32,068**	**38,820**	**45,664**	**34,654**	**437,633**
December 31, 2018						
By delinquency status:						
Current-29 DPD	263,881	33,644	38,008	43,604	35,794	414,931
30-59 DPD	1,411	247	292	1,040	140	3,130
60-89 DPD	549	126	212	314	87	1,288
90-119 DPD	257	74	192	109	80	712
120-179 DPD	225	77	320	2	27	651
180+ DPD	822	213	1	—	20	1,056
Government insured/guaranteed loans (1)	12,688	—	—	—	—	12,688
Loans held at fair value	244	—	—	—	—	244
Total consumer loans (excluding PCI)	280,077	34,381	39,025	45,069	36,148	434,700
Total consumer PCI loans (carrying value) (2)	4,988	17	—	—	—	5,005
Total consumer loans	285,065	34,398	39,025	45,069	36,148	439,705

(1) Represents loans whose repayments are predominantly insured by the FHA or guaranteed by the VA. Loans insured/guaranteed by the FHA/VA and 90+ DPD totaled $6.5 billion at June 30, 2019, compared with $7.7 billion at December 31, 2018.
(2) 23% of the adjusted unpaid principal balance for consumer PCI loans are 30+ DPD at June 30, 2019, compared with 18% at December 31, 2018.

Of the $1.9 billion of consumer loans not government insured/guaranteed that are 90 days or more past due at June 30, 2019, $739 million was accruing, compared with $2.4 billion past due and $885 million accruing at December 31, 2018.

Real estate 1-4 family first mortgage loans 180 days or more past due totaled $630 million, or 0.2% of total first mortgages (excluding PCI), at June 30, 2019, compared with $822 million, or 0.3%, at December 31, 2018.

Table 6.11 provides a breakdown of our consumer portfolio by FICO. Substantially all of the scored consumer portfolio has an updated FICO of 680 and above, reflecting a strong current borrower credit profile. FICO is not available for certain loan types, or may not be required if we deem it unnecessary due to strong collateral and other borrower attributes. Substantially all loans not requiring a FICO score are securities-based loans originated through retail brokerage, and totaled $8.6 billion at June 30, 2019, and $8.9 billion at December 31, 2018.

Table 6.11: Consumer Loans by FICO

(in millions)	Real estate 1-4 family first mortgage	Real estate 1-4 family junior lien mortgage	Credit card	Automobile	Other revolving credit and installment	Total
June 30, 2019						
By FICO:						
< 600	**3,539**	**1,297**	**3,064**	**6,442**	**707**	**15,049**
600-639	**2,559**	**897**	**2,670**	**4,498**	**677**	**11,301**
640-679	**5,276**	**1,720**	**6,313**	**6,386**	**1,757**	**21,452**
680-719	**12,898**	**3,620**	**9,415**	**7,475**	**3,283**	**36,691**
720-759	**27,807**	**4,947**	**8,022**	**7,051**	**4,164**	**51,991**
760-799	**61,007**	**6,001**	**5,323**	**6,240**	**4,999**	**83,570**
800+	**157,049**	**12,346**	**3,879**	**7,464**	**8,011**	**188,749**
No FICO available	**3,759**	**1,225**	**134**	**108**	**2,434**	**7,660**
FICO not required	**—**	**—**	**—**	**—**	**8,622**	**8,622**
Government insured/guaranteed loans (1)	**11,374**	**—**	**—**	**—**	**—**	**11,374**
Total consumer loans (excluding PCI)	**285,268**	**32,053**	**38,820**	**45,664**	**34,654**	**436,459**
Total consumer PCI loans (carrying value) (2)	**1,159**	**15**	**—**	**—**	**—**	**1,174**
Total consumer loans	**286,427**	**32,068**	**38,820**	**45,664**	**34,654**	**437,633**
December 31, 2018						
By FICO:						
< 600	4,273	1,454	3,292	7,071	697	16,787
600-639	2,974	994	2,777	4,431	725	11,901
640-679	5,810	1,898	6,464	6,225	1,822	22,219
680-719	13,568	3,908	9,445	7,354	3,384	37,659
720-759	27,258	5,323	7,949	6,853	4,395	51,778
760-799	57,193	6,315	5,227	5,947	5,322	80,004
800+	151,465	13,190	3,794	7,099	8,411	183,959
No FICO available	4,604	1,299	77	89	2,507	8,576
FICO not required	—	—	—	—	8,885	8,885
Government insured/guaranteed loans (1)	12,932	—	—	—	—	12,932
Total consumer loans (excluding PCI)	280,077	34,381	39,025	45,069	36,148	434,700
Total consumer PCI loans (carrying value) (2)	4,988	17	—	—	—	5,005
Total consumer loans	285,065	34,398	39,025	45,069	36,148	439,705

(1) Represents loans whose repayments are predominantly insured by the FHA or guaranteed by the VA.
(2) 44% of the adjusted unpaid principal balance for consumer PCI loans have FICO scores less than 680 and 16% where no FICO is available to us at June 30, 2019, compared with 45% and 15%, respectively, at December 31, 2018.

LTV refers to the ratio comparing the loan's unpaid principal balance to the property's collateral value. CLTV refers to the combination of first mortgage and junior lien mortgage (including unused line amounts for credit line products) ratios. LTVs and CLTVs are updated quarterly using a cascade approach which first uses values provided by automated valuation models (AVMs) for the property. If an AVM is not available, then the value is estimated using the original appraised value adjusted by the change in Home Price Index (HPI) for the property location. If an HPI is not available, the original appraised value is used. The HPI value is normally the only method considered for high value properties, generally with an original value of $1 million or more, as the AVM values have proven less accurate for these properties.

Table 6.12 shows the most updated LTV and CLTV distribution of the real estate 1-4 family first and junior lien mortgage loan portfolios. We consider the trends in residential real estate markets as we monitor credit risk and establish our allowance for credit losses. In the event of a default, any loss should be limited to the portion of the loan amount in excess of the net realizable value of the underlying real estate collateral value. Certain loans do not have an LTV or CLTV due to industry data availability and portfolios acquired from or serviced by other institutions.

Table 6.12: Consumer Loans by LTV/CLTV

	June 30, 2019			December 31, 2018		
(in millions)	Real estate 1-4 family first mortgage by LTV	Real estate 1-4 family junior lien mortgage by CLTV	Total	Real estate 1-4 family first mortgage by LTV	Real estate 1-4 family junior lien mortgage by CLTV	Total
By LTV/CLTV:						
0-60%	$ 145,884	15,004	160,888	147,666	15,753	163,419
60.01-80%	110,919	10,452	121,371	104,477	11,183	115,660
80.01-100%	14,763	4,387	19,150	12,372	4,874	17,246
100.01-120% (1)	1,052	1,350	2,402	1,211	1,596	2,807
> 120% (1)	412	480	892	484	578	1,062
No LTV/CLTV available	864	380	1,244	935	397	1,332
Government insured/guaranteed loans (2)	11,374	—	11,374	12,932	—	12,932
Total consumer loans (excluding PCI)	285,268	32,053	317,321	280,077	34,381	314,458
Total consumer PCI loans (carrying value) (3)	1,159	15	1,174	4,988	17	5,005
Total consumer loans	$ 286,427	32,068	318,495	285,065	34,398	319,463

(1) Reflects total loan balances with LTV/CLTV amounts in excess of 100%. In the event of default, the loss content would generally be limited to only the amount in excess of 100% LTV/CLTV.
(2) Represents loans whose repayments are predominantly insured by the FHA or guaranteed by the VA.
(3) 12% of the adjusted unpaid principal balance for consumer PCI loans have LTV/CLTV amounts greater than 80% at June 30, 2019, compared with 10% at December 31, 2018.

NONACCRUAL LOANS Table 6.13 provides loans on nonaccrual status. PCI loans are excluded from this table because they continue to earn interest from accretable yield, independent of performance in accordance with their contractual terms.

Table 6.13: Nonaccrual Loans

(in millions)	Jun 30, 2019	Dec 31, 2018
Commercial:		
Commercial and industrial	$ 1,634	1,486
Real estate mortgage	737	580
Real estate construction	36	32
Lease financing	63	90
Total commercial	2,470	2,188
Consumer:		
Real estate 1-4 family first mortgage	2,425	3,183
Real estate 1-4 family junior lien mortgage	868	945
Automobile	115	130
Other revolving credit and installment	44	50
Total consumer	3,452	4,308
Total nonaccrual loans (excluding PCI)	$ 5,922	6,496

LOANS IN PROCESS OF FORECLOSURE Our recorded investment in consumer mortgage loans collateralized by residential real estate property that are in process of foreclosure was $3.7 billion and $4.6 billion at June 30, 2019, and December 31, 2018, respectively, which included $2.9 billion and $3.2 billion, respectively, of loans that are government insured/guaranteed. Under the Consumer Financial Protection Bureau guidelines, we do not commence the foreclosure process on consumer real estate loans until after the loan is 120 days delinquent. Foreclosure procedures and timelines vary depending on whether the property address resides in a judicial or non-judicial state. Judicial states require the foreclosure to be processed through the state's courts while non-judicial states are processed without court intervention. Foreclosure timelines vary according to state law.

LOANS 90 DAYS OR MORE PAST DUE AND STILL ACCRUING Certain loans 90 days or more past due as to interest or principal are still accruing, because they are (1) well-secured and in the process of collection or (2) real estate 1-4 family mortgage loans or consumer loans exempt under regulatory rules from being classified as nonaccrual until later delinquency, usually 120 days past due. PCI loans of $156 million at June 30, 2019, and $370 million at December 31, 2018, are not included in past due and still accruing loans even when they are 90 days or more contractually past due. PCI loans are considered to be accruing because they continue to earn interest from accretable yield, independent of performance in accordance with their contractual terms.

Table 6.14 shows non-PCI loans 90 days or more past due and still accruing by class for loans not government insured/ guaranteed.

Table 6.14: Loans 90 Days or More Past Due and Still Accruing (1)

(in millions)		Jun 30, 2019	Dec 31, 2018
Total (excluding PCI):	$	**7,258**	8,704
Less: FHA insured/VA guaranteed (1)		**6,478**	7,725
Total, not government insured/ guaranteed	$	**780**	979
By segment and class, not government insured/ guaranteed:			
Commercial:			
Commercial and industrial	$	**17**	43
Real estate mortgage		**24**	51
Real estate construction		**—**	—
Total commercial		**41**	94
Consumer:			
Real estate 1-4 family first mortgage		**108**	124
Real estate 1-4 family junior lien mortgage		**27**	32
Credit card		**449**	513
Automobile		**63**	114
Other revolving credit and installment		**92**	102
Total consumer		**739**	885
Total, not government insured/ guaranteed	$	**780**	979

(1) Represents loans whose repayments are predominantly insured by the FHA or guaranteed by the VA.

IMPAIRED LOANS Table 6.15 summarizes key information for impaired loans. Our impaired loans predominantly include loans on nonaccrual status in the commercial portfolio segment and loans modified in a TDR, whether on accrual or nonaccrual status. These impaired loans generally have estimated losses which are included in the allowance for credit losses. We have impaired loans with no allowance for credit losses when loss content has been previously recognized through charge-offs and we do not anticipate additional charge-offs or losses, or certain loans are currently performing in accordance with their terms and for which no loss has been estimated. Impaired loans exclude PCI loans. Table 6.15 includes trial modifications that totaled $127 million at June 30, 2019, and $149 million at December 31, 2018.

For additional information on our impaired loans and allowance for credit losses, see Note 1 (Summary of Significant Accounting Policies) in our 2018 Form 10-K.

Table 6.15: Impaired Loans Summary

		Recorded investment		
(in millions)	Unpaid principal balance (1)	Impaired loans	Impaired loans with related allowance for credit losses	Related allowance for credit losses
June 30, 2019				
Commercial:				
Commercial and industrial	**$ 2,963**	**2,169**	**1,991**	**303**
Real estate mortgage	**1,297**	**1,142**	**1,078**	**134**
Real estate construction	**82**	**54**	**53**	**10**
Lease financing	**91**	**82**	**82**	**20**
Total commercial	**4,433**	**3,447**	**3,204**	**467**
Consumer:				
Real estate 1-4 family first mortgage (2)	**8,803**	**8,307**	**3,782**	**451**
Real estate 1-4 family junior lien mortgage	**1,781**	**1,603**	**1,040**	**174**
Credit card	**487**	**486**	**486**	**194**
Automobile	**144**	**85**	**45**	**9**
Other revolving credit and installment	**166**	**160**	**142**	**41**
Total consumer (3)	**11,381**	**10,641**	**5,495**	**869**
Total impaired loans (excluding PCI)	**$ 15,814**	**14,088**	**8,699**	**1,336**
December 31, 2018				
Commercial:				
Commercial and industrial	$ 3,057	2,030	1,730	319
Real estate mortgage	1,228	1,032	1,009	154
Real estate construction	74	47	46	9
Lease financing	146	112	112	32
Total commercial	4,505	3,221	2,897	514
Consumer:				
Real estate 1-4 family first mortgage	12,309	10,738	4,420	525
Real estate 1-4 family junior lien mortgage	1,886	1,694	1,133	183
Credit card	449	449	449	172
Automobile	153	89	43	8
Other revolving credit and installment	162	156	136	41
Total consumer (3)	14,959	13,126	6,181	929
Total impaired loans (excluding PCI)	$ 19,464	16,347	9,078	1,443

(1) Excludes the unpaid principal balance for loans that have been fully charged off or otherwise have zero recorded investment.
(2) Impaired loans includes reduction of $1.7 billion reclassified to MLHFS.
(3) Includes the recorded investment of $1.2 billion at June 30, 2019, and $1.3 billion at December 31, 2018, of government insured/guaranteed loans that are predominantly insured by the FHA or guaranteed by the VA and generally do not have an allowance. Impaired loans may also have limited, if any, allowance when the recorded investment of the loan approximates estimated net realizable value as a result of charge-offs prior to a TDR modification.

Commitments to lend additional funds on loans whose terms have been modified in a TDR amounted to $478 million and $513 million at June 30, 2019 and December 31, 2018, respectively.

Table 6.16 provides the average recorded investment in impaired loans and the amount of interest income recognized on impaired loans by portfolio segment and class.

Table 6.16: Average Recorded Investment in Impaired Loans

	Quarter ended June 30,				Six months ended June 30,			
	2019		2018		**2019**		2018	
(in millions)	**Average recorded investment**	**Recognized interest income**	Average recorded investment	Recognized interest income	**Average recorded investment**	**Recognized interest income**	Average recorded investment	Recognized interest income
Commercial:								
Commercial and industrial	**$ 2,285**	**50**	2,212	43	**2,249**	**73**	2,318	79
Real estate mortgage	**1,116**	**16**	1,299	22	**1,079**	**31**	1,266	50
Real estate construction	**55**	**—**	62	1	**53**	**2**	60	2
Lease financing	**88**	**—**	138	1	**98**	**—**	132	1
Total commercial	**3,544**	**66**	3,711	67	**3,479**	**106**	3,776	132
Consumer:								
Real estate 1-4 family first mortgage	**9,398**	**128**	11,772	167	**9,950**	**281**	11,921	339
Real estate 1-4 family junior lien mortgage	**1,630**	**26**	1,832	29	**1,654**	**52**	1,861	58
Credit card	**480**	**16**	398	12	**470**	**31**	384	22
Automobile	**86**	**3**	82	3	**87**	**7**	83	6
Other revolving credit and installment	**158**	**3**	140	3	**157**	**7**	136	5
Total consumer	**11,752**	**176**	14,224	214	**12,318**	**378**	14,385	430
Total impaired loans (excluding PCI)	**$ 15,296**	**242**	17,935	281	**15,797**	**484**	18,161	562
Interest income:								
Cash basis of accounting		**$ 76**		84		**135**		165
Other (1)		**166**		197		**349**		397
Total interest income		**$ 242**		281		**484**		562

(1) Includes interest recognized on accruing TDRs, interest recognized related to certain impaired loans which have an allowance calculated using discounting, and amortization of purchase accounting adjustments related to certain impaired loans.

TROUBLED DEBT RESTRUCTURINGS (TDRs) When, for economic or legal reasons related to a borrower's financial difficulties, we grant a concession for other than an insignificant period of time to a borrower that we would not otherwise consider, the related loan is classified as a TDR, the balance of which totaled $12.6 billion and $15.5 billion at June 30, 2019 and December 31, 2018, respectively. We do not consider loan resolutions such as foreclosure or short sale to be a TDR.

We may require some consumer borrowers experiencing financial difficulty to make trial payments generally for a period of three to four months, according to the terms of a planned permanent modification, to determine if they can perform according to those terms. These arrangements represent trial modifications, which we classify and account for as TDRs. While loans are in trial payment programs, their original terms are not considered modified and they continue to advance through delinquency status and accrue interest according to their original terms.

Table 6.17 summarizes our TDR modifications for the periods presented by primary modification type and includes the financial effects of these modifications. For those loans that modify more than once, the table reflects each modification that occurred during the period. Loans that both modify and pay off within the period, as well as changes in recorded investment during the period for loans modified in prior periods, are not included in the table.

Table 6.17: TDR Modifications

	Primary modification type (1)				Financial effects of modifications		
(in millions)	Principal (2)	Interest rate reduction	Other concessions (3)	Total	Charge-offs (4)	Weighted average interest rate reduction	Recorded investment related to interest rate reduction (5)
Quarter ended June 30, 2019							
Commercial:							
Commercial and industrial	**$ —**	**34**	**180**	**214**	**26**	**0.34%**	**$ 34**
Real estate mortgage	**—**	**24**	**95**	**119**	**—**	**0.49**	**24**
Real estate construction	**13**	**—**	**13**	**26**	**—**	**—**	**—**
Lease financing	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Total commercial	**13**	**58**	**288**	**359**	**26**	**0.40**	**58**
Consumer:							
Real estate 1-4 family first mortgage	**28**	**2**	**181**	**211**	**—**	**1.83**	**19**
Real estate 1-4 family junior lien mortgage	**1**	**11**	**21**	**33**	**1**	**2.39**	**11**
Credit card	**—**	**89**	**—**	**89**	**—**	**13.35**	**89**
Automobile	**2**	**3**	**14**	**19**	**8**	**4.13**	**3**
Other revolving credit and installment	**—**	**12**	**1**	**13**	**—**	**7.67**	**12**
Trial modifications (6)	**—**	**—**	**5**	**5**	**—**	**—**	**—**
Total consumer	**31**	**117**	**222**	**370**	**9**	**10.06**	**134**
Total	**$ 44**	**175**	**510**	**729**	**35**	**7.17%**	**$ 192**
Quarter ended June 30, 2018							
Commercial:							
Commercial and industrial	$ 3	5	449	457	14	0.58%	$ 5
Real estate mortgage	—	11	121	132	—	0.67	11
Real estate construction	—	—	1	1	—	—	—
Lease financing	—	—	—	—	—	—	—
Total commercial	3	16	571	590	14	0.64	16
Consumer:							
Real estate 1-4 family first mortgage	64	8	286	358	2	2.26	31
Real estate 1-4 family junior lien mortgage	2	12	30	44	2	1.66	13
Credit card	—	83	—	83	—	13.19	83
Automobile	2	4	11	17	5	6.49	4
Other revolving credit and installment	—	10	2	12	—	7.95	10
Trial modifications (6)	—	—	17	17	—	—	—
Total consumer	68	117	346	531	9	9.17	141
Total	$ 71	133	917	1,121	23	8.30%	$ 157

(in millions)	Principal (2)	Interest rate reduction	Other concessions (3)	Total	Charge-offs (4)	Weighted average interest rate reduction	Recorded investment related to interest rate reduction (5)
	Primary modification type (1)				Financial effects of modifications		
Six months ended June 30, 2019							
Commercial:							
Commercial and industrial	**$ —**	**45**	**734**	**779**	**39**	**0.42%**	**$ 45**
Real estate mortgage	**—**	**26**	**168**	**194**	**—**	**0.54**	**26**
Real estate construction	**13**	**—**	**16**	**29**	**—**	**—**	**—**
Lease financing	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Total commercial	**13**	**71**	**918**	**1,002**	**39**	**0.47**	**71**
Consumer:							
Real estate 1-4 family first mortgage	**63**	**5**	**475**	**543**	**1**	**1.89**	**38**
Real estate 1-4 family junior lien mortgage	**3**	**22**	**46**	**71**	**2**	**2.34**	**23**
Credit card	**—**	**186**	**—**	**186**	**—**	**13.27**	**186**
Automobile	**4**	**4**	**26**	**34**	**14**	**4.55**	**4**
Other revolving credit and installment	**—**	**23**	**4**	**27**	**—**	**7.63**	**23**
Trial modifications (6)	**—**	**—**	**5**	**5**	**—**	**—**	**—**
Total consumer	**70**	**240**	**556**	**866**	**17**	**10.17**	**274**
Total	**$ 83**	**311**	**1,474**	**1,868**	**56**	**8.18%**	**$ 345**
Six months ended June 30, 2018							
Commercial:							
Commercial and industrial	$ 3	14	937	954	20	0.88%	$ 14
Real estate mortgage	—	17	219	236	—	0.89	17
Real estate construction	—	—	4	4	—	—	—
Lease financing	—	—	39	39	—	—	—
Total commercial	3	31	1,199	1,233	20	0.88	31
Consumer:							
Real estate 1-4 family first mortgage	110	18	592	720	3	2.33	66
Real estate 1-4 family junior lien mortgage	3	20	58	81	3	1.89	22
Credit card	—	169	—	169	—	12.24	169
Automobile	3	8	25	36	14	6.48	8
Other revolving credit and installment	—	25	4	29	—	7.95	25
Trial modifications (6)	—	—	32	32	—	—	—
Total consumer	116	240	711	1,067	20	8.67	290
Total	$ 119	271	1,910	2,300	40	7.92%	$ 321

(1) Amounts represent the recorded investment in loans after recognizing the effects of the TDR, if any. TDRs may have multiple types of concessions, but are presented only once in the first modification type based on the order presented in the table above. The reported amounts include loans remodified of $323 million and $381 million for the quarters ended June 30, 2019 and 2018, respectively, and $683 million and $884 million for the first half of 2019 and 2018, respectively.

(2) Principal modifications include principal forgiveness at the time of the modification, contingent principal forgiveness granted over the life of the loan based on borrower performance, and principal that has been legally separated and deferred to the end of the loan, with a zero percent contractual interest rate.

(3) Other concessions include loans discharged in bankruptcy, loan renewals, term extensions and other interest and noninterest adjustments, but exclude modifications that also forgive principal and/or reduce the contractual interest rate.

(4) Charge-offs include write-downs of the investment in the loan in the period it is contractually modified. The amount of charge-off will differ from the modification terms if the loan has been charged down prior to the modification based on our policies. In addition, there may be cases where we have a charge-off/down with no legal principal modification. Modifications resulted in legally forgiving principal (actual, contingent or deferred) of $3 million and $14 million for the quarters ended June 30, 2019 and 2018, and $6 million and $17 million for the first half of 2019 and 2018, respectively.

(5) Reflects the effect of reduced interest rates on loans with an interest rate concession as one of its concession types, which includes loans reported as a principal primary modification type that also have an interest rate concession.

(6) Trial modifications are granted a delay in payments due under the original terms during the trial payment period. However, these loans continue to advance through delinquency status and accrue interest according to their original terms. Any subsequent permanent modification generally includes interest rate related concessions; however, the exact concession type and resulting financial effect are usually not known until the loan is permanently modified. Trial modifications for the period are presented net of previously reported trial modifications that became permanent in the current period.

Table 6.18 summarizes permanent modification TDRs that have defaulted in the current period within 12 months of their permanent modification date. We are reporting these defaulted TDRs based on a payment default definition of 90 days past due for the commercial portfolio segment and 60 days past due for the consumer portfolio segment.

Table 6.18: Defaulted TDRs

		Recorded investment of defaults			
		Quarter ended June 30,		Six months ended June 30,	
(in millions)		**2019**	2018	**2019**	2018
Commercial:					
Commercial and industrial	$	**25**	7	**48**	93
Real estate mortgage		**5**	14	**33**	40
Real estate construction		**—**	16	**3**	16
Total commercial		**30**	37	**84**	149
Consumer:					
Real estate 1-4 family first mortgage		**13**	15	**24**	33
Real estate 1-4 family junior lien mortgage		**4**	2	**9**	7
Credit card		**21**	24	**42**	37
Automobile		**4**	4	**7**	7
Other revolving credit and installment		**1**	1	**3**	2
Total consumer		**43**	46	**85**	86
Total	$	**73**	83	**169**	235

Purchased Credit-Impaired Loans

Table 6.19 presents PCI loans net of any remaining purchase accounting adjustments. Real estate 1-4 family first mortgage PCI loans are predominantly Pick-a-Pay loans.

Table 6.19: PCI Loans

(in millions)		**Jun 30, 2019**	Dec 31, 2018
Total commercial	$	**—**	4
Consumer:			
Real estate 1-4 family first mortgage		**1,159**	4,988
Real estate 1-4 family junior lien mortgage		**15**	17
Total consumer		**1,174**	5,005
Total PCI loans (carrying value)	$	**1,174**	5,009
Total PCI loans (unpaid principal balance)	$	**1,952**	7,348

Note 7: Leasing Activity

The information below provides a summary of our leasing activities as a lessor and lessee.

As a Lessor

Table 7.1 presents the composition of our leasing revenue and Table 7.2 provides the components of our investment in lease financing.

Table 7.1: Leasing Revenue

(in millions)	Quarter ended June 30, 2019	Six months ended June 30, 2019
Interest income on lease financing	$ 224	447
Other lease revenues:		
Variable revenues on lease financing	26	50
Fixed revenues on operating leases	357	730
Variable revenues on operating leases	14	32
Other lease-related revenues (1)	27	55
Lease income	424	867
Total leasing revenue	$ 648	1,314

(1) Predominantly includes net gains on disposition of assets leased under operating leases or lease financings.

Table 7.2: Investment in Lease Financing

(in millions)	Jun 30, 2019
Lease receivables	$ 17,735
Residual asset values	4,244
Unearned income	(2,655)
Lease financing	$ 19,324

Our net investment in financing and sales-type leases includes $2.1 billion of leveraged leases at June 30, 2019.

As shown in Table 9.1, included in Note 9 (Other Assets), we had $8.7 billion in operating lease assets at June 30, 2019, which was net of $3.2 billion of accumulated depreciation. Depreciation expense for the lease assets was $219 million and $448 million in the second quarter and first half of 2019, respectively.

Table 7.3 presents future lease payments owed by our lessees.

Table 7.3: Maturities of Lease Receivables

	June 30, 2019	
(in millions)	Direct financing and sales- type leases	Operating leases
Remainder of 2019	$ 3,036	535
2020	5,167	880
2021	4,004	591
2022	2,127	407
2023	1,219	269
Thereafter	2,182	605
Total lease receivables	$ 17,735	3,287

As a Lessee

Substantially all of our leases are operating leases. Table 7.4 presents balances for our operating leases.

Table 7.4: Operating Lease Right of Use (ROU) Assets and Lease Liabilities

(in millions)	Jun 30, 2019
ROU assets	$ 4,776
Lease liabilities	5,302

Table 7.5 provides the composition of our lease costs, which are predominantly included in net occupancy expense.

Table 7.5: Lease Costs

(in millions)	Quarter ended June 30, 2019	Six months ended June 30, 2019
Fixed lease expense - operating leases	$ 291	588
Variable lease expense	80	153
Other (1)	(9)	(17)
Total lease costs	$ 362	724

(1) Predominantly includes sublease rental income and gains recognized from sale leaseback transactions.

Note 7: Leasing Activity (*continued*)

Tables 7.6 and 7.7 provide the future lease payments under operating leases as of December 31, 2018 and June 30, 2019, respectively. Table 7.7 also includes information on the remaining average lease term and discount rate.

Table 7.6: Lease Payments on Operating Leases Prior to Adoption of ASU 2016-02 - Leases

(in millions)	December 31, 2018
2019	$ 1,174
2020	1,056
2021	880
2022	713
2023	577
Thereafter	1,654
Total	$ 6,054

Table 7.7: Lease Payments on Operating Leases Subsequent to Adoption of ASU 2016-02 - Leases

(in millions, except for weighted averages)	June 30, 2019
Remainder of 2019	$ 566
2020	1,127
2021	947
2022	792
2023	654
Thereafter	2,054
Total lease payments	6,140
Less: imputed interest	838
Total operating lease liabilities	$ 5,302
Weighted average remaining lease term (in years)	7.3
Weighted average discount rate	3.2%

Our operating leases predominantly expire within the next 15 years, with the longest lease expiring in 2105. We do not include renewal or termination options in the establishment of the lease term when we are not reasonably certain that we will exercise them. As of June 30, 2019, we had additional operating leases commitments of $72 million, predominantly for real estate, which leases had not yet commenced. These leases will commence by 2020 and have lease terms of 1 year to 11 years.

Note 8: Equity Securities

Table 8.1 provides a summary of our equity securities by business purpose and accounting method, including equity securities with readily determinable fair values (marketable) and those without readily determinable fair values (nonmarketable).

Table 8.1: Equity Securities

(in millions)	Jun 30, 2019	Dec 31, 2018
Held for trading at fair value:		
Marketable equity securities	$ 23,327	19,449
Not held for trading:		
Fair value:		
Marketable equity securities (1)	5,379	4,513
Nonmarketable equity securities	7,244	5,594
Total equity securities at fair value	12,623	10,107
Equity method:		
Low-income housing tax credit investments	11,162	10,999
Private equity	3,352	3,832
Tax-advantaged renewable energy	3,051	3,073
New market tax credit and other	294	311
Total equity method	17,859	18,215
Other:		
Federal Reserve Bank stock and other at cost (2)	5,622	5,643
Private equity (3)	2,106	1,734
Total equity securities not held for trading	38,210	35,699
Total equity securities	$ 61,537	55,148

(1) Includes $3.5 billion and $3.2 billion at June 30, 2019, and December 31, 2018, respectively, related to securities held as economic hedges of our deferred compensation plan obligations.
(2) Includes $5.6 billion and $5.6 billion at June 30, 2019 and December 31, 2018, respectively, related to investments in Federal Reserve Bank and Federal Home Loan Bank stock.
(3) Represents nonmarketable equity securities accounted for under the measurement alternative.

Equity Securities Held for Trading

Equity securities held for trading purposes are marketable equity securities traded on organized exchanges. These securities are held as part of our customer accommodation trading activities. For more information on these activities, see Note 4 (Trading Activities).

Equity Securities Not Held for Trading

We also hold equity securities unrelated to trading activities. These securities include private equity and tax credit investments, securities held as economic hedges or to meet regulatory requirements (for example, Federal Reserve Bank and Federal Home Loan Bank stock). Equity securities not held for trading purposes are accounted for at either fair value, equity method, cost or the measurement alternative.

FAIR VALUE Marketable equity securities held for purposes other than trading primarily consist of exchange-traded equity funds held to economically hedge obligations related to our deferred compensation plans and to a lesser extent other holdings of publicly traded equity securities held for investment purposes. We account for certain nonmarketable equity securities under the fair value method, and substantially all of these securities are economically hedged with equity derivatives.

EQUITY METHOD Our equity method investments consist of tax credit and private equity investments, the majority of which are our low-income housing tax credit (LIHTC) investments.

We invest in affordable housing projects that qualify for the LIHTC, which are designed to promote private development of low-income housing. These investments generate a return mostly through realization of federal tax credit and other tax benefits. In the second quarter and first half of 2019, we recognized pre-tax losses of $298 million and $571 million, respectively, related to our LIHTC investments, compared with $287 million and $567 million, respectively, for the same periods a year ago. These losses were recognized in other noninterest income. We also recognized total tax benefits of $376 million and $746 million in the second quarter and first half of 2019, respectively, which included tax credits recorded to income taxes of $303 million and $605 million for the same periods, respectively. In the second quarter and first half of 2018, total tax benefits were $352 million and $711 million, respectively, which included tax credits of $281 million and $571 million for the same periods, respectively. We are periodically required to provide additional financial support during the investment period. A liability is recognized for unfunded commitments that are both legally binding and probable of funding. These commitments are predominantly funded within three years of initial investment. Our liability for these unfunded commitments was $3.9 billion at June 30, 2019, and $3.6 billion at December 31, 2018. This liability for unfunded commitments is included in long-term debt.

OTHER The remaining portion of our nonmarketable equity securities portfolio consists of securities accounted for using the cost or measurement alternative method.

Realized Gains and Losses Not Held for Trading

Table 8.2 provides a summary of the net gains and losses from equity securities not held for trading. Gains and losses for securities held for trading are reported in net gains from trading activities.

Table 8.2: Net Gains (Losses) from Equity Securities Not Held for Trading

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Net gains (losses) from equity securities carried at fair value:				
Marketable equity securities	**$ 264**	28	**641**	36
Nonmarketable equity securities	**732**	594	**1,668**	703
Total equity securities carried at fair value	**996**	622	**2,309**	739
Net gains (losses) from nonmarketable equity securities not carried at fair value:				
Impairment write-downs	**(31)**	(237)	**(67)**	(257)
Net unrealized gains related to measurement alternative observable transactions	**146**	35	**331**	263
Net realized gains on sale	**169**	399	**406**	897
All other	**—**	16	**—**	34
Total nonmarketable equity securities not carried at fair value	**284**	213	**670**	937
Net losses from economic hedge derivatives (1)	**(658)**	(540)	**(1,543)**	(598)
Total net gains from equity securities	**$ 622**	295	**1,436**	1,078

(1) Includes net gains (losses) on derivatives not designated as hedging instruments.

Measurement Alternative

Table 8.3 provides additional information about the impairment write-downs and observable price adjustments related to nonmarketable equity securities accounted for under the measurement alternative. Gains and losses related to these adjustments are also included in Table 8.2.

Table 8.3: Net Gains (Losses) from Measurement Alternative Equity Securities

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Net gains (losses) recognized in earnings during the period:				
Gross unrealized gains due to observable price changes	**$ 157**	43	**342**	271
Gross unrealized losses due to observable price changes	**(11)**	(8)	**(11)**	(8)
Impairment write-downs	**(11)**	(5)	**(33)**	(12)
Realized net gains from sale	**102**	16	**125**	91
Total net gains recognized during the period	**$ 237**	46	**423**	342

Table 8.4 presents cumulative carrying value adjustments to nonmarketable equity securities accounted for under the measurement alternative that were still held as of the balance sheet date.

Table 8.4: Measurement Alternative Cumulative Gains (Losses)

(in millions)	**Jun 30, 2019**	Dec 31, 2018
Cumulative gains (losses):		
Gross unrealized gains due to observable price changes	**$ 733**	415
Gross unrealized losses due to observable price changes	**(36)**	(25)
Impairment write-downs	**(52)**	(33)

Note 9: Other Assets

Table 9.1 presents the components of other assets.

Table 9.1: Other Assets

(in millions)		Jun 30, 2019	Dec 31, 2018
Corporate/bank-owned life insurance	$	**19,912**	19,751
Accounts receivable (1)		**26,213**	34,281
Interest receivable		**6,177**	6,084
Customer relationship and other amortized intangibles		**479**	545
Foreclosed assets:			
Residential real estate:			
Government insured/guaranteed		**68**	88
Non-government insured/guaranteed		**185**	229
Other		**124**	134
Operating lease assets (lessor)		**8,663**	9,036
Operating lease ROU assets (lessee) (2)		**4,776**	—
Due from customers on acceptances		**272**	258
Other		**9,489**	9,444
Total other assets	$	**76,358**	79,850

(1) Certain government-guaranteed residential real estate mortgage loans upon foreclosure are included in Accounts receivable. For more information, see Note 1 (Summary of Significant Accounting Policies) in our 2018 Form 10-K.

(2) We recognized operating lease right of use (ROU) assets effective January 1, 2019, in connection with the adoption of ASU 2016-02 – Leases. For more information, see Note 1 (Summary of Significant Accounting Policies).

Note 10: Securitizations and Variable Interest Entities

Involvement with Special Purpose Entities (SPEs)
In the normal course of business, we enter into various types of on- and off-balance sheet transactions with SPEs, which are corporations, trusts, limited liability companies or partnerships that are established for a limited purpose. Generally, SPEs are formed in connection with securitization transactions and are considered variable interest entities (VIEs). For further description of our involvement with SPEs, see Note 9 (Securitizations and Variable Interest Entities) in our 2018 Form 10-K.

We have segregated our involvement with VIEs between those VIEs which we consolidate, those which we do not consolidate and those for which we account for the transfers of financial assets as secured borrowings. Secured borrowings are transactions involving transfers of our financial assets to third parties that are accounted for as financings with the assets pledged as collateral. Accordingly, the transferred assets remain recognized on our balance sheet. Subsequent tables within this Note further segregate these transactions by structure type.

Table 10.1 provides the classifications of assets and liabilities in our balance sheet for our transactions with VIEs.

Table 10.1: Balance Sheet Transactions with VIEs

(in millions)	VIEs that we do not consolidate	VIEs that we consolidate	Transfers that we account for as secured borrowings	Total
June 30, 2019				
Cash and due from banks	**$ —**	**11**	**—**	**11**
Interest-earning deposits with banks	**—**	**8**	**—**	**8**
Debt securities:				
Trading debt securities	**2,072**	**60**	**200**	**2,332**
Available-for-sale debt securities (1)	**1,879**	**—**	**68**	**1,947**
Held-to-maturity debt securities	**560**	**—**	**—**	**560**
Loans	**1,214**	**13,602**	**87**	**14,903**
Mortgage servicing rights	**12,354**	**—**	**—**	**12,354**
Derivative assets	**143**	**—**	**—**	**143**
Equity securities	**11,211**	**121**	**—**	**11,332**
Other assets	**—**	**208**	**2**	**210**
Total assets	**29,433**	**14,010**	**357**	**43,800**
Short-term borrowings	**—**	**—**	**263**	**263**
Derivative liabilities	**1**	**1** (2)	**—**	**2**
Accrued expenses and other liabilities	**198**	**201** (2)	**2**	**401**
Long-term debt	**3,857**	**748** (2)	**85**	**4,690**
Total liabilities	**4,056**	**950**	**350**	**5,356**
Noncontrolling interests	**—**	**41**	**—**	**41**
Net assets	**$ 25,377**	**13,019**	**7**	**38,403**
December 31, 2018				
Cash and due from banks	$ —	139	—	139
Interest-earning deposits with banks	—	8	—	8
Debt securities:				
Trading debt securities	2,110	45	200	2,355
Available-for-sale debt securities (1)	2,686	—	317	3,003
Held-to-maturity debt securities	510	—	—	510
Loans	1,433	13,564	94	15,091
Mortgage servicing rights	14,761	—	—	14,761
Derivative assets	53	—	—	53
Equity securities	11,041	85	—	11,126
Other assets	—	221	6	227
Total assets	32,594	14,062	617	47,273
Short-term borrowings	—	—	493	493
Derivative liabilities	26	— (2)	—	26
Accrued expenses and other liabilities	231	191 (2)	8	430
Long-term debt	3,870	816 (2)	93	4,779
Total liabilities	4,127	1,007	594	5,728
Noncontrolling interests	—	34	—	34
Net assets	$ 28,467	13,021	23	41,511

(1) Excludes certain debt securities related to loans serviced for the Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC) and GNMA.
(2) There were no VIE liabilities with recourse to the general credit of Wells Fargo for the periods presented.

Transactions with Unconsolidated VIEs

Our transactions with unconsolidated VIEs include securitizations of residential mortgage loans, CRE loans, student loans, automobile loans and leases, certain dealer floorplan loans; investment and financing activities involving collateralized debt obligations (CDOs) backed by asset-backed and CRE securities, tax credit structures, collateralized loan obligations (CLOs) backed by corporate loans, and other types of structured financing. We have various forms of involvement with VIEs, including servicing, holding senior or subordinated interests, entering into liquidity arrangements, credit default swaps and other derivative contracts. Involvements with these unconsolidated VIEs are recorded on our balance sheet in debt and equity securities, loans, MSRs, derivative assets and liabilities, other assets, other liabilities, and long-term debt, as appropriate.

Table 10.2 provides a summary of unconsolidated VIEs with which we have significant continuing involvement, but we are not the primary beneficiary. We do not consider our continuing involvement in an unconsolidated VIE to be significant when it relates to third-party sponsored VIEs for which we were not the transferor (unless we are servicer and have other significant forms of involvement) or if we were the sponsor only or sponsor and servicer but do not have any other forms of significant involvement.

Significant continuing involvement includes transactions where we were the sponsor or transferor and have other significant forms of involvement. Sponsorship includes transactions with unconsolidated VIEs where we solely or materially participated in the initial design or structuring of the entity or marketing of the transaction to investors. When we transfer assets to a VIE and account for the transfer as a sale, we are considered the transferor. We consider investments in securities (other than those held temporarily in trading), loans, guarantees, liquidity agreements, written options and servicing of collateral to be other forms of involvement that may be significant. We have excluded certain transactions with unconsolidated VIEs from the balances presented in the following table where we have determined that our continuing involvement is not significant due to the temporary nature and size of our variable interests, because we were not the transferor or because we were not involved in the design of the unconsolidated VIEs. We also exclude from the table secured borrowing transactions with unconsolidated VIEs (for information on these transactions, see the Transactions with Consolidated VIEs and Secured Borrowings section in this Note).

Table 10.2: Unconsolidated VIEs

			Carrying value – asset (liability)				
(in millions)		Total VIE assets	Debt and equity interests (1)	Servicing assets	Derivatives	Other commitments and guarantees	Net assets
June 30, 2019							
Residential mortgage loan securitizations:							
Conforming (2)	$	1,132,124	2,367	11,420	—	(136)	13,651
Other/nonconforming		9,438	37	57	—	—	94
Commercial mortgage securitizations		154,690	2,041	877	85	(42)	2,961
Collateralized debt obligations:							
Debt securities		637	—	—	4	(20)	(16)
Asset-based finance structures		244	143	—	—	—	143
Tax credit structures		36,888	12,232	—	—	(3,857)	8,375
Collateralized loan obligations		176	1	—	—	—	1
Investment funds		210	49	—	—	—	49
Other (3)		1,508	66	—	53	—	119
Total	$	1,335,915	16,936	12,354	142	(4,055)	25,377

		Maximum exposure to loss				
		Debt and equity interests (1)	Servicing assets	Derivatives	Other commitments and guarantees	Total exposure
Residential mortgage loan securitizations:						
Conforming	$	2,367	11,420	—	902	14,689
Other/nonconforming		37	57	—	—	94
Commercial mortgage securitizations		2,041	877	85	12,007	15,010
Collateralized debt obligations:						
Debt securities		—	—	4	20	24
Asset-based finance structures		143	—	—	71	214
Tax credit structures		12,232	—	—	1,373	13,605
Collateralized loan obligations		1	—	—	—	1
Investment funds		49	—	—	—	49
Other (3)		66	—	54	159	279
Total	$	16,936	12,354	143	14,532	43,965

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(in millions)		Total VIE assets	Debt and equity interests (1)	Servicing assets	Derivatives	Other commitments and guarantees	Net assets
			Carrying value – asset (liability)				
December 31, 2018							
Residential mortgage loan securitizations:							
Conforming (2)	$	1,172,833	2,377	13,811	—	(171)	16,017
Other/nonconforming		10,596	453	57	—	—	510
Commercial mortgage securitizations		153,350	2,409	893	(22)	(40)	3,240
Collateralized debt obligations:							
Debt securities		659	—	—	5	(20)	(15)
Asset-based finance structures		304	205	—	—	—	205
Tax credit structures		35,185	12,087	—	—	(3,870)	8,217
Collateralized loan obligations		2	—	—	—	—	—
Investment funds		185	42	—	—	—	42
Other (3)		1,688	207	—	44	—	251
Total	$	1,374,802	17,780	14,761	27	(4,101)	28,467

		Debt and equity interests (1)	Servicing assets	Derivatives	Other commitments and guarantees	Total exposure
		Maximum exposure to loss				
Residential mortgage loan securitizations:						
Conforming	$	2,377	13,811	—	1,183	17,371
Other/nonconforming		453	57	—	—	510
Commercial mortgage securitizations		2,409	893	28	11,563	14,893
Collateralized debt obligations:						
Debt securities		—	—	5	20	25
Asset-based finance structures		205	—	—	71	276
Tax credit structures		12,087	—	—	1,420	13,507
Collateralized loan obligations		—	—	—	—	—
Investment funds		42	—	—	—	42
Other (3)		207	—	45	158	410
Total	$	17,780	14,761	78	14,415	47,034

(1) Includes total equity interests of $11.2 billion and $11.0 billion at June 30, 2019, and December 31, 2018, respectively. Also includes debt interests in the form of both loans and securities. Excludes certain debt securities held related to loans serviced for FNMA, FHLMC and GNMA.

(2) Excludes assets and related liabilities with a recorded carrying value on our balance sheet of $551 million and $1.2 billion at June 30, 2019, and December 31, 2018, respectively, for certain delinquent loans that are eligible for repurchase from GNMA loan securitizations. The recorded carrying value represents the amount that would be payable if the Company was to exercise the repurchase option. The carrying amounts are excluded from the table because the loans eligible for repurchase do not represent interests in the VIEs.

(3) Includes structured financing and credit-linked note structures.

In Table 10.2, "Total VIE assets" represents the remaining principal balance of assets held by unconsolidated VIEs using the most current information available. For VIEs that obtain exposure to assets synthetically through derivative instruments, the remaining notional amount of the derivative is included in the asset balance. "Carrying value" is the amount in our consolidated balance sheet related to our involvement with the unconsolidated VIEs. "Maximum exposure to loss" from our involvement with off-balance sheet entities, which is a required disclosure under GAAP, is determined as the carrying value of our involvement with off-balance sheet (unconsolidated) VIEs plus the remaining undrawn liquidity and lending commitments, the notional amount of net written derivative contracts, and generally the notional amount of, or stressed loss estimate for, other commitments and guarantees. It represents estimated loss that would be incurred under severe, hypothetical circumstances, for which we believe the possibility is extremely remote, such as where the value of our interests and any associated collateral declines to zero, without any consideration of recovery or offset from any economic hedges. Accordingly, this required disclosure is not an indication of expected loss.

For complete descriptions of our types of transactions with unconsolidated VIEs with which we have a significant continuing involvement, but we are not the primary beneficiary, see Note 9 (Securitizations and Variable Interest Entities) in our 2018 Form 10-K.

INVESTMENT FUNDS We voluntarily waived a portion of our management fees for certain money market funds that are exempt from the consolidation analysis to ensure the funds maintained a minimum level of daily net investment income. The amount of fees waived in the second quarter and first half of 2019 was $10 million and $20 million, respectively, compared with $12 million and $25 million, respectively, in the same periods of 2018.

TRUST PREFERRED SECURITIES VIEs that we wholly own issue debt securities or preferred equity to third party investors. All of the proceeds of the issuance are invested in debt securities or preferred equity that we issue to the VIEs. The VIEs' operations and cash flows relate only to the issuance, administration and repayment of the securities held by third parties. We do not consolidate these VIEs because the sole assets of the VIEs are receivables from us, even though we own all of the voting equity shares of the VIEs, have fully guaranteed the obligations of the VIEs and may have the right to redeem the third party securities under certain circumstances. In our consolidated balance sheet we reported the debt securities issued to the VIEs as long-term junior subordinated debt with a carrying value of $2.1 billion and $2.0 billion at June 30, 2019 and December 31, 2018, respectively, and the preferred equity securities issued to the VIEs as preferred stock with a carrying value of $2.5 billion at both dates. These VIEs are not included in the preceding table.

Loan Sales and Securitization Activity

We periodically transfer consumer and CRE loans and other types of financial assets in securitization and whole loan sale transactions. We typically retain the servicing rights from these sales and may continue to hold other beneficial interests in the transferred financial assets. We may also provide liquidity to investors in the beneficial interests and credit enhancements in the form of standby letters of credit. Through these transfers we may be exposed to liability under limited amounts of recourse as well as standard representations and warranties we make to purchasers and issuers. Table 10.3 presents the cash flows for our transfers accounted for as sales in which we have continuing involvement with the transferred financial assets.

Table 10.3: Cash Flows From Sales and Securitization Activity

(in millions)		Mortgage loans 2019	Mortgage loans 2018
Quarter ended June 30,			
Proceeds from securitizations and whole loan sales	$	**39,697**	51,990
Fees from servicing rights retained		**786**	830
Cash flows from other interests held (1)		**133**	168
Repurchases of assets/loss reimbursements (2):			
Non-agency securitizations and whole loan transactions		**1**	1
Agency securitizations (3)		**27**	19
Servicing advances, net of repayments		**(54)**	(7)
Six months ended June 30,			
Proceeds from securitizations and whole loan sales	$	**76,204**	102,577
Fees from servicing rights retained		**1,566**	1,675
Cash flows from other interests held (1)		**244**	353
Repurchases of assets/loss reimbursements (2):			
Non-agency securitizations and whole loan transactions		**1**	2
Agency securitizations (3)		**44**	52
Servicing advances, net of repayments		**(93)**	(43)

(1) Cash flows from other interests held include principal and interest payments received on retained bonds and excess cash flows received on interest-only strips. We also received $1 million in both the second quarter and first half of 2018 related to other financial assets.
(2) Consists of cash paid to repurchase loans from investors and cash paid to investors to reimburse them for losses on individual loans that are already liquidated.
(3) Represent loans repurchased from GNMA, FNMA, and FHLMC under representation and warranty provisions included in our loan sales contracts. Second quarter and first half of 2019 exclude $1.3 billion and $3.2 billion, respectively, in delinquent insured/guaranteed loans that we service and have exercised our option to purchase out of GNMA pools, compared with $1.8 billion and $4.7 billion, respectively, in the same periods of 2018. These loans are predominantly insured by the FHA or guaranteed by the VA.

In the second quarter and first half of 2019, we recognized net gains of $119 million and $180 million, respectively, from transfers accounted for as sales of financial assets, in which we have continuing involvement with the transferred assets, compared with $54 million and $112 million, respectively, in the same periods of 2018. Net gains recognized in the second quarter and first half of 2018 were revised from the amounts previously reported to exclude transfers for which we do not have continuing involvement. These net gains predominantly relate to commercial mortgage securitizations, and residential mortgage securitizations where the loans were not already carried at fair value.

Sales with continuing involvement during the second quarter and first half of 2019 and 2018 largely related to securitizations of residential mortgages that are sold to the government-sponsored entities (GSEs), including FNMA, FHLMC and GNMA (conforming residential mortgage securitizations). During the second quarter and first half of 2019, we transferred $36.7 billion and $70.8 billion, respectively, in fair value of residential mortgages to unconsolidated VIEs and third-party investors and recorded the transfers as sales, compared with $47.7 billion and $95.0 billion, respectively, in the same periods of 2018. Substantially all of these transfers did not result in a gain or loss because the loans were already carried at fair value. In connection with all of these transfers, in the first half of 2019, we recorded a $707 million servicing asset, measured at fair value using a Level 3 measurement technique, securities of $3.4 billion, classified as Level 2, and a $8 million liability for repurchase losses which reflects management's estimate of probable losses related to various representations and warranties for the loans transferred, initially measured at fair value. In the first half of 2018, we recorded a $988 million servicing asset, securities of $1.8 billion, and a $7 million liability.

Table 10.4 presents the key weighted-average assumptions we used to measure residential mortgage servicing rights at the date of securitization.

Table 10.4: Residential Mortgage Servicing Rights

		Residential mortgage servicing rights 2019	Residential mortgage servicing rights 2018
Quarter ended June 30,			
Prepayment speed (1)		**13.5%**	10.7
Discount rate		**7.5**	7.4
Cost to service ($ per loan) (2)	$	**121**	146
Six months ended June 30,			
Prepayment speed (1)		**13.5%**	10.1
Discount rate		**7.7**	7.4
Cost to service ($ per loan) (2)	$	**109**	132

(1) The prepayment speed assumption for residential mortgage servicing rights includes a blend of prepayment speeds and default rates. Prepayment speed assumptions are influenced by mortgage interest rate inputs as well as our estimation of drivers of borrower behavior.
(2) Includes costs to service and unreimbursed foreclosure costs, which can vary period to period depending on the mix of modified government-guaranteed loans sold to GNMA.

During the second quarter and first half of 2019, we transferred $3.4 billion and $6.1 billion, respectively, in carrying value of commercial mortgages to unconsolidated VIEs and third-party investors and recorded the transfers as sales, compared with $4.4 billion and $7.5 billion, respectively, in the same periods of 2018. These transfers resulted in gains of $74 million and $121 million in the second quarter and first half of 2019, respectively, because the loans were carried at LOCOM, compared with gains of $60 million and $129 million in the same periods of 2018. In connection with these transfers, in the first half of 2019, we recorded a servicing asset of $59 million, initially measured at fair value using a Level 3 measurement technique, and no securities. In the first half of 2018, we recorded a servicing asset of $73 million and securities of $208 million.

Retained Interests from Unconsolidated VIEs

Table 10.5 provides key economic assumptions and the sensitivity of the current fair value of residential mortgage servicing rights and other interests held related to unconsolidated VIEs to immediate adverse changes in those assumptions. "Other interests held" relate to residential and commercial mortgage loan securitizations. Residential mortgage-backed securities retained in securitizations issued through GSEs, such as FNMA, FHLMC and GNMA, are excluded from the table because these securities have a remote risk of credit loss due to the GSE guarantee. These securities also have economic characteristics similar to GSE mortgage-backed securities that we purchase, which are not included in the table. Subordinated interests include only those bonds whose credit rating was below AAA by a major rating agency at issuance. Senior interests include only those bonds whose credit rating was AAA by a major rating agency at issuance. The information presented excludes trading positions held in inventory.

Table 10.5: Retained Interests from Unconsolidated VIEs

			Other interests held	
			Commercial	
($ in millions, except cost to service amounts)	Residential mortgage servicing rights (1)	Interest-only strips	Subordinated bonds	Senior bonds
Fair value of interests held at June 30, 2019	**$ 12,096**	**14**	**706**	**302**
Expected weighted-average life (in years)	**5.6**	**3.4**	**7.2**	**5.3**
Key economic assumptions:				
Prepayment speed assumption (2)	**12.2%**	**18.8**		
Decrease in fair value from:				
10% adverse change	**$ 526**	**1**		
25% adverse change	**1,239**	**1**		
Discount rate assumption	**7.4%**	**13.9**	**3.5**	**2.8**
Decrease in fair value from:				
100 basis point increase	**$ 499**	**—**	**41**	**14**
200 basis point increase	**954**	**—**	**79**	**26**
Cost to service assumption ($ per loan)	**104**			
Decrease in fair value from:				
10% adverse change	**283**			
25% adverse change	**707**			
Credit loss assumption			**4.4%**	**—**
Decrease in fair value from:				
10% higher losses			**$ 2**	**—**
25% higher losses			**5**	**—**
Fair value of interests held at December 31, 2018	$ 14,649	16	668	309
Expected weighted-average life (in years)	6.5	3.6	7.0	5.7
Key economic assumptions:				
Prepayment speed assumption (2)	9.9%	17.7		
Decrease in fair value from:				
10% adverse change	$ 530	1		
25% adverse change	1,301	1		
Discount rate assumption	8.1%	14.5	4.3	3.7
Decrease in fair value from:				
100 basis point increase	$ 615	—	37	14
200 basis point increase	1,176	1	72	28
Cost to service assumption ($ per loan)	106			
Decrease in fair value from:				
10% adverse change	316			
25% adverse change	787			
Credit loss assumption			5.1%	—
Decrease in fair value from:				
10% higher losses			$ 2	—
25% higher losses			5	—

(1) See narrative following this table for a discussion of commercial mortgage servicing rights.
(2) The prepayment speed assumption for residential mortgage servicing rights includes a blend of prepayment speeds and default rates. Prepayment speed assumptions are influenced by mortgage interest rate inputs as well as our estimation of drivers of borrower behavior.

In addition to residential MSRs included in the previous table, we have a small portfolio of commercial MSRs with a fair value of $1.9 billion and $2.3 billion at June 30, 2019, and December 31, 2018, respectively. The nature of our commercial MSRs, which are carried at LOCOM, is different from our residential MSRs. Prepayment activity on serviced loans does not significantly impact the value of commercial MSRs because, unlike residential mortgages, commercial mortgages experience significantly lower prepayments due to certain contractual restrictions, impacting the borrower's ability to prepay the mortgage. Similarly, prepayment speed assumptions do not significantly impact the value of the commercial mortgage securitization bonds. Additionally, for our commercial MSR portfolio, we are typically master/primary servicer, but not the special servicer, who is separately responsible for the servicing and workout of delinquent and foreclosed loans. It is the special servicer, similar to our role as servicer of residential mortgage loans, who is affected by higher servicing and foreclosure costs due to an increase in delinquent and foreclosed loans. Accordingly, prepayment speeds and costs to service are not key assumptions for commercial MSRs as they do not significantly impact the valuation. The primary economic driver impacting the fair value of our commercial MSRs is forward interest rates, which are derived from market observable yield curves used to price capital markets instruments. Market interest rates significantly affect interest earned on custodial deposit balances. The sensitivity of the current fair value to an immediate adverse 25% change in the assumption about interest earned on deposit balances at June 30, 2019, and December 31, 2018, results in a decrease in fair value of $231 million and $320 million, respectively. See Note 11 (Mortgage Banking Activities) for further information on our commercial MSRs.

The sensitivities in the preceding paragraph and table are hypothetical and caution should be exercised when relying on this data. Changes in value based on variations in assumptions generally cannot be extrapolated because the relationship of the change in the assumption to the change in value may not be linear. Also, the effect of a variation in a particular assumption on the value of the other interests held is calculated independently without changing any other assumptions. In reality, changes in one factor may result in changes in others (for example, changes in prepayment speed estimates could result in changes in the credit losses), which might magnify or counteract the sensitivities.

Off-Balance Sheet Loans

Table 10.6 presents information about the principal balances of off-balance sheet loans that were sold or securitized, including residential mortgage loans sold to FNMA, FHLMC, GNMA and other investors, for which we have some form of continuing involvement (including servicer). Delinquent loans include loans 90 days or more past due and loans in bankruptcy, regardless of delinquency status. For loans sold or securitized where servicing is our only form of continuing involvement, we would only experience a loss if we were required to repurchase a delinquent loan or foreclosed asset due to a breach in representations and warranties associated with our loan sale or servicing contracts.

Table 10.6: Off-Balance Sheet Loans Sold or Securitized

	Total loans		Delinquent loans and foreclosed assets (1)		Net charge-offs Six months ended Jun 30,	
(in millions)	**Jun 30, 2019**	Dec 31, 2018	**Jun 30, 2019**	Dec 31, 2018	**2019**	2018
Commercial:						
Real estate mortgage	**$ 107,239**	105,173	**955**	1,008	**89**	151
Total commercial	**107,239**	105,173	**955**	1,008	**89**	151
Consumer:						
Real estate 1-4 family first mortgage	**1,045,840**	1,097,128	**7,650**	8,947	**110**	250
Total consumer	**1,045,840**	1,097,128	**7,650**	8,947	**110**	250
Total off-balance sheet sold or securitized loans (2)	**$ 1,153,079**	1,202,301	**8,605**	9,955	**199**	401

(1) Includes $583 million and $675 million of commercial foreclosed assets and $507 million and $582 million of consumer foreclosed assets at June 30, 2019, and December 31, 2018, respectively.
(2) At June 30, 2019, and December 31, 2018, the table includes total loans of $1.1 trillion at both dates, delinquent loans of $5.7 billion and $6.4 billion, and foreclosed assets of $364 million and $442 million, respectively, for FNMA, FHLMC and GNMA. Net charge-offs exclude loans sold to FNMA, FHLMC and GNMA as we do not service or manage the underlying real estate upon foreclosure and, as such, do not have access to net charge-off information.

Transactions with Consolidated VIEs and Secured Borrowings

Table 10.7 presents a summary of financial assets and liabilities for asset transfers accounted for as secured borrowings and involvements with consolidated VIEs. Carrying values of "Assets" are presented using GAAP measurement methods, which may include fair value, credit impairment or other adjustments, and therefore in some instances will differ from "Total VIE assets." For VIEs that obtain exposure synthetically through derivative instruments, the remaining notional amount of the derivative is included in "Total VIE assets." On the consolidated balance sheet, we separately disclose the consolidated assets of certain VIEs that can only be used to settle the liabilities of those VIEs.

Table 10.7: Transactions with Consolidated VIEs and Secured Borrowings

			Carrying value			
(in millions)		Total VIE assets	Assets	Liabilities	Noncontrolling interests	Net assets
June 30, 2019						
Secured borrowings:						
Municipal tender option bond securitizations	**$**	**263**	**270**	**(265)**	**—**	**5**
Residential mortgage securitizations		**87**	**87**	**(85)**	**—**	**2**
Total secured borrowings		**350**	**357**	**(350)**	**—**	**7**
Consolidated VIEs:						
Commercial and industrial loans and leases		**7,742**	**7,728**	**(490)**	**(13)**	**7,225**
Nonconforming residential mortgage loan securitizations		**1,475**	**1,288**	**(452)**	**—**	**836**
Commercial real estate loans		**4,794**	**4,794**	**—**	**—**	**4,794**
Investment funds		**194**	**194**	**(6)**	**(24)**	**164**
Other		**6**	**6**	**(2)**	**(4)**	**—**
Total consolidated VIEs		**14,211**	**14,010**	**(950)**	**(41)**	**13,019**
Total secured borrowings and consolidated VIEs	**$**	**14,561**	**14,367**	**(1,300)**	**(41)**	**13,026**
December 31, 2018						
Secured borrowings:						
Municipal tender option bond securitizations	$	627	523	(501)	—	22
Residential mortgage securitizations		95	94	(93)	—	1
Total secured borrowings		722	617	(594)	—	23
Consolidated VIEs:						
Commercial and industrial loans and leases		8,215	8,204	(477)	(14)	7,713
Nonconforming residential mortgage loan securitizations		1,947	1,732	(521)	—	1,211
Commercial real estate loans		3,957	3,957	—	—	3,957
Investment funds		155	155	(5)	(15)	135
Other		14	14	(4)	(5)	5
Total consolidated VIEs		14,288	14,062	(1,007)	(34)	13,021
Total secured borrowings and consolidated VIEs	$	15,010	14,679	(1,601)	(34)	13,044

For complete descriptions of our accounting for transfers accounted for as secured borrowings and involvements with consolidated VIEs, see Note 9 (Securitizations and Variable Interest Entities) in our 2018 Form 10-K.

Note 11: Mortgage Banking Activities

Mortgage banking activities, included in the Community Banking and Wholesale Banking operating segments, consist of residential and commercial mortgage originations, sale activity and servicing.

We apply the amortization method to commercial MSRs and the fair value method to residential MSRs. Table 11.1 presents the changes in MSRs measured using the fair value method.

Table 11.1: Analysis of Changes in Fair Value MSRs

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	2019	2018	2019	2018
Fair value, beginning of period	$ 13,336	15,041	14,649	13,625
Servicing from securitizations or asset transfers (1)	400	486	741	1,059
Sales and other (2)	(1)	(1)	(282)	(5)
Net additions	399	485	459	1,054
Changes in fair value:				
Due to changes in valuation model inputs or assumptions:				
Mortgage interest rates (3)	(1,153)	376	(2,093)	1,629
Servicing and foreclosure costs (4)	(22)	30	(10)	64
Discount rates (5)	(109)	—	(9)	—
Prepayment estimates and other (6)	206	(61)	143	(18)
Net changes in valuation model inputs or assumptions	(1,078)	345	(1,969)	1,675
Changes due to collection/realization of expected cash flows over time	(561)	(460)	(1,043)	(943)
Total changes in fair value	(1,639)	(115)	(3,012)	732
Fair value, end of period	$ 12,096	15,411	12,096	15,411

(1) Includes impacts associated with exercising our right to repurchase delinquent loans from GNMA loan securitization pools. Total reported MSRs may increase upon repurchase due to servicing liabilities associated with these loans.
(2) Includes sales and transfers of MSRs, which can result in an increase of total reported MSRs if the sales or transfers are related to nonperforming loan portfolios or portfolios with servicing liabilities.
(3) Includes prepayment speed changes as well as other valuation changes due to changes in mortgage interest rates (such as changes in estimated interest earned on custodial deposit balances).
(4) Includes costs to service and unreimbursed foreclosure costs.
(5) Reflects discount rate assumption change, excluding portion attributable to changes in mortgage interest rates.
(6) Represents changes driven by other valuation model inputs or assumptions including prepayment speed estimation changes and other assumption updates. Prepayment speed estimation changes are influenced by observed changes in borrower behavior and other external factors that occur independent of interest rate changes.

Table 11.2 presents the changes in amortized MSRs.

Table 11.2: Analysis of Changes in Amortized MSRs

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	2019	2018	2019	2018
Balance, beginning of period	$ 1,427	1,411	1,443	1,424
Purchases	16	22	40	40
Servicing from securitizations or asset transfers	33	39	59	73
Amortization	(69)	(65)	(135)	(130)
Balance, end of period (1)	$ 1,407	1,407	1,407	1,407
Fair value of amortized MSRs:				
Beginning of period	$ 2,149	2,307	2,288	2,025
End of period	1,897	2,309	1,897	2,309

(1) Commercial amortized MSRs are evaluated for impairment purposes by the following risk strata: agency (GSEs) for multi-family properties and non-agency. There was no valuation allowance recorded for the periods presented on the commercial amortized MSRs.

Note 11: Mortgage Banking Activities (*continued*)

We present the components of our managed servicing portfolio in Table 11.3 at unpaid principal balance for loans serviced and subserviced for others and at book value for owned loans serviced.

Table 11.3: Managed Servicing Portfolio

(in billions)	Jun 30, 2019	Dec 31, 2018
Residential mortgage servicing:		
Serviced for others	$ 1,107	1,164
Owned loans serviced	340	334
Subserviced for others	5	4
Total residential servicing	1,452	1,502
Commercial mortgage servicing:		
Serviced for others	548	543
Owned loans serviced	123	121
Subserviced for others	9	9
Total commercial servicing	680	673
Total managed servicing portfolio	$ 2,132	2,175
Total serviced for others	$ 1,655	1,707
Ratio of MSRs to related loans serviced for others	0.82%	0.94

Table 11.4 presents the components of mortgage banking noninterest income.

Table 11.4: Mortgage Banking Noninterest Income

		Quarter ended June 30,		Six months ended June 30,	
(in millions)		2019	2018	2019	2018
Servicing income, net:					
Servicing fees:					
Contractually specified servicing fees		$ 846	901	1,686	1,817
Late charges		30	42	63	86
Ancillary fees		38	47	76	87
Unreimbursed direct servicing costs (1)		(84)	(85)	(154)	(179)
Net servicing fees		830	905	1,671	1,811
Changes in fair value of MSRs carried at fair value:					
Due to changes in valuation model inputs or assumptions (2)	(A)	(1,078)	345	(1,969)	1,675
Changes due to collection/realization of expected cash flows over time		(561)	(460)	(1,043)	(943)
Total changes in fair value of MSRs carried at fair value		(1,639)	(115)	(3,012)	732
Amortization		(69)	(65)	(135)	(130)
Net derivative gains (losses) from economic hedges (3)	(B)	1,155	(319)	2,117	(1,539)
Total servicing income, net		277	406	641	874
Net gains on mortgage loan origination/sales activities (4)		481	364	825	830
Total mortgage banking noninterest income		$ 758	770	1,466	1,704
Market-related valuation changes to MSRs, net of hedge results (2)(3)	(A)+(B)	$ 77	26	148	136

(1) Includes costs associated with foreclosures, unreimbursed interest advances to investors, and other interest costs.
(2) Refer to the analysis of changes in fair value MSRs presented in Table 11.1 in this Note for more detail.
(3) Represents results from economic hedges used to hedge the risk of changes in fair value of MSRs. See Note 15 (Derivatives) for additional discussion and detail.
(4) Includes net gains (losses) of $(283) million and $(434) million in the second quarter and first half of 2019, respectively, and $134 million and $759 million in the second quarter and first half of 2018, respectively, related to derivatives used as economic hedges of mortgage loans held for sale and derivative loan commitments.

Note 12: Intangible Assets

Table 12.1 presents the gross carrying value of intangible assets and accumulated amortization.

Table 12.1: Intangible Assets

			June 30, 2019			December 31, 2018
(in millions)	**Gross carrying value**	**Accumulated amortization**	**Net carrying value**	Gross carrying value	Accumulated amortization	Net carrying value
Amortized intangible assets (1):						
MSRs (2)	**$ 4,260**	**(2,853)**	**1,407**	4,161	(2,718)	1,443
Core deposit intangibles	**—**	**—**	**—**	12,834	(12,834)	—
Customer relationship and other intangibles	**3,937**	**(3,458)**	**479**	3,994	(3,449)	545
Total amortized intangible assets	**$ 8,197**	**(6,311)**	**1,886**	20,989	(19,001)	1,988
Unamortized intangible assets:						
MSRs (carried at fair value) (2)	**$ 12,096**			14,649		
Goodwill	**26,415**			26,418		
Trademark	**14**			14		

(1) Balances are excluded commencing in the period following full amortization.
(2) See Note 11 (Mortgage Banking Activities) for additional information on MSRs.

Table 12.2 provides the current year and estimated future amortization expense for amortized intangible assets. We based our projections of amortization expense shown below on existing asset balances at June 30, 2019. Future amortization expense may vary from these projections.

Table 12.2: Amortization Expense for Intangible Assets

(in millions)	Amortized MSRs	Customer relationship and other intangibles	Total
Six months ended June 30, 2019 (actual)	**$ 135**	**59**	**194**
Estimate for the remainder of 2019	**$ 136**	**55**	**191**
Estimate for year ended December 31,			
2020	249	95	344
2021	213	81	294
2022	188	68	256
2023	159	59	218
2024	134	48	182

Table 12.3 shows the allocation of goodwill to our reportable operating segments.

Table 12.3: Goodwill

(in millions)		Community Banking	Wholesale Banking	Wealth and Investment Management	Consolidated Company
December 31, 2017	$	16,849	8,455	1,283	26,587
Reclassification of goodwill held for sale to other assets		(155)	—	—	(155)
Reduction in goodwill related to divested businesses and other		—	(3)	—	(3)
June 30, 2018 (1)	$	16,694	8,452	1,283	26,429
December 31, 2018	**$**	**16,685**	**8,450**	**1,283**	**26,418**
Reclassification of goodwill held for sale to other assets		**—**	**—**	**(7)**	**(7)**
Foreign currency translation		**—**	**4**	**—**	**4**
June 30, 2019 (1)	**$**	**16,685**	**8,454**	**1,276**	**26,415**

(1) At June 30, 2018, others assets included goodwill classified as held-for-sale of $155 million related to the sales agreements for Reliable Financial Services, Inc. and the branch divestitures announced in June 2018. At June 30, 2019, other assets included goodwill classified as held-for-sale of $7 million related to the sale of our Institutional Retirement and Trust business, which was announced in April 2019 and closed on July 1, 2019.

We assess goodwill for impairment at a reporting unit level, which is one level below the operating segments. See Note 22 (Operating Segments) for further information on management reporting.

Note 13: Guarantees, Pledged Assets and Collateral, and Other Commitments

Guarantees are contracts that contingently require us to make payments to a guaranteed party based on an event or a change in an underlying asset, liability, rate or index. Guarantees are generally in the form of standby letters of credit, securities lending and other indemnifications, written put options, recourse obligations, and other types of similar arrangements. For complete descriptions of our guarantees, see Note 15 (Guarantees, Pledged Assets and Collateral, and Other Commitments) in our 2018 Form 10-K. Table 13.1 shows carrying value, maximum exposure to loss on our guarantees and the related non-investment grade amounts.

Table 13.1: Guarantees – Carrying Value and Maximum Exposure to Loss

			Maximum exposure to loss					
(in millions)		Carrying value of obligation (asset)	Expires in one year or less	Expires after one year through three years	Expires after three years through five years	Expires after five years	Total	Non-investment grade
June 30, 2019								
Standby letters of credit (1)	**$**	**38**	**14,078**	**7,185**	**3,901**	**464**	**25,628**	**7,938**
Securities lending and other indemnifications (2)		**—**	**—**	**1**	**—**	**849**	**850**	**1**
Written put options (3)		**(371)**	**12,574**	**11,682**	**2,803**	**386**	**27,445**	**15,882**
Loans and MLHFS sold with recourse (4)		**53**	**111**	**634**	**1,205**	**10,597**	**12,547**	**9,318**
Factoring guarantees (5)		**—**	**639**	**—**	**—**	**—**	**639**	**558**
Other guarantees		**1**	**—**	**—**	**3**	**4,146**	**4,149**	**1**
Total guarantees	**$**	**(279)**	**27,402**	**19,502**	**7,912**	**16,442**	**71,258**	**33,698**
December 31, 2018								
Standby letters of credit (1)	$	40	14,636	7,897	3,398	497	26,428	8,027
Securities lending and other indemnifications (2)		—	—	1	—	1,044	1,045	1
Written put options (3)		(185)	17,243	10,502	3,066	400	31,211	21,732
Loans and MLHFS sold with recourse (4)		54	104	653	1,207	10,163	12,127	9,079
Factoring guarantees (5)		—	889	—	—	—	889	751
Other guarantees		1	—	—	3	2,959	2,962	1
Total guarantees	$	(90)	32,872	19,053	7,674	15,063	74,662	39,591

(1) Total maximum exposure to loss includes direct pay letters of credit (DPLCs) of $6.4 billion and $7.5 billion at June 30, 2019, and December 31, 2018, respectively.
(2) Includes indemnifications provided to certain third-party clearing agents. Outstanding customer obligations under these arrangements were $90 million and $70 million with related collateral of $759 million and $974 million at June 30, 2019, and December 31, 2018, respectively.
(3) Written put options, which are in the form of derivatives, are also included in the derivative disclosures in Note 15 (Derivatives). Carrying value net asset position is a result of certain deferred premium option trades.
(4) Represent recourse provided, predominantly to the GSEs, on loans sold under various programs and arrangements.
(5) Consists of guarantees made under certain factoring arrangements to purchase trade receivables from third parties, generally upon their request, if receivable debtors default on their payment obligations.

"Maximum exposure to loss" and "Non-investment grade" are required disclosures under GAAP. Non-investment grade represents those guarantees on which we have a higher risk of performance under the terms of the guarantee. If the underlying assets under the guarantee are non-investment grade (that is, an external rating that is below investment grade or an internal credit default grade that is equivalent to a below investment grade external rating), we consider the risk of performance to be high. Internal credit default grades are determined based upon the same credit policies that we use to evaluate the risk of payment or performance when making loans and other extensions of credit. Credit quality indicators we usually consider in evaluating risk of payments or performance are described in Note 6 (Loans and Allowance for Credit Losses).

Maximum exposure to loss represents the estimated loss that would be incurred under an assumed hypothetical circumstance, despite what we believe is a remote possibility, where the value of our interests and any associated collateral declines to zero. Maximum exposure to loss estimates in Table 13.1 do not reflect economic hedges or collateral we could use to offset or recover losses we may incur under our guarantee agreements. Accordingly, this required disclosure is not an indication of expected loss. We believe the carrying value, which is either fair value for derivative-related products or the allowance for lending-related commitments, is more representative of our exposure to loss than maximum exposure to loss.

Pledged Assets

As part of our liquidity management strategy, we pledge various assets to secure trust and public deposits, borrowings and letters of credit from the Federal Home Loan Bank (FHLB) and FRB, securities sold under agreements to repurchase (repurchase agreements), securities lending arrangements, and for other purposes as required or permitted by law or insurance statutory requirements. The types of collateral we pledge include securities issued by federal agencies, GSEs, domestic and foreign companies and various commercial and consumer loans. Table 13.2 provides the total carrying amount of pledged assets by asset type and the fair value of pledged off-balance sheet securities for securities financings. The table excludes pledged consolidated VIE assets of $14.0 billion and $14.1 billion at June 30, 2019, and December 31, 2018, respectively, which can only be used to settle the liabilities of those entities. The table also excludes $357 million and $617 million in assets pledged in transactions with VIE's accounted for as secured borrowings at June 30, 2019, and December 31, 2018, respectively. See Note 10 (Securitizations and Variable Interest Entities) for additional information on consolidated VIE assets and secured borrowings.

Table 13.2: Pledged Assets

(in millions)		Jun 30, 2019	Dec 31, 2018
Related to trading activities:			
Debt securities	$	**107,673**	96,616
Equity securities		**10,594**	9,695
Total pledged assets related to trading activities (1)		**118,267**	106,311
Related to non-trading activities:			
Debt securities and other (2)		**56,413**	62,438
Mortgage loans held for sale and loans (3)		**413,882**	453,894
Total pledged assets related to non-trading activities		**470,295**	516,332
Total pledged assets	$	**588,562**	622,643

(1) Consists of pledged assets related to trading activities of $45.9 billion and $45.5 billion at June 30, 2019, and December 31, 2018, respectively and off-balance sheet securities of $72.3 billion and $60.8 billion as of the same dates, respectively, that are pledged as collateral for repurchase agreements and other securities financings. Total pledged assets related to trading activities includes $118.2 billion and $106.2 billion at June 30, 2019, and December 31, 2018, respectively, under agreements that permit the secured parties to sell or repledge the collateral.

(2) Includes carrying value of $3.5 billion and $4.2 billion (fair value of $3.5 billion and $4.1 billion) in collateral for repurchase agreements at June 30, 2019, and December 31, 2018, respectively, which are pledged under agreements that do not permit the secured parties to sell or repledge the collateral. Also includes $33 million and $68 million in collateral pledged under repurchase agreements at June 30, 2019, and December 31, 2018, respectively, that permit the secured parties to sell or repledge the collateral. Substantially all other pledged securities are pursuant to agreements that do not permit the secured party to sell or repledge the collateral.

(3) Includes mortgage loans held for sale of $2.0 billion and $7.4 billion at June 30, 2019, and December 31, 2018, respectively. Substantially all of the total mortgage loans held for sale and loans are pledged under agreements that do not permit the secured parties to sell or repledge the collateral. Amounts exclude $551 million and $1.2 billion at June 30, 2019, and December 31, 2018, respectively, of pledged loans recorded on our balance sheet representing certain delinquent loans that are eligible for repurchase from GNMA loan securitizations.

Securities Financing Activities

We enter into resale and repurchase agreements and securities borrowing and lending agreements (collectively, "securities financing activities") typically to finance trading positions (including securities and derivatives), acquire securities to cover short trading positions, accommodate customers' financing needs, and settle other securities obligations. These activities are conducted through our broker-dealer subsidiaries and to a lesser extent through other bank entities. Most of our securities financing activities involve high quality, liquid securities such as U.S. Treasury securities and government agency securities, and to a lesser extent, less liquid securities, including equity securities, corporate bonds and asset-backed securities. We account for these transactions as collateralized financings in which we typically receive or pledge securities as collateral. We believe these financing transactions generally do not have material credit risk given the collateral provided and the related monitoring processes.

OFFSETTING OF SECURITIES FINANCING ACTIVITIES Table 13.3 presents resale and repurchase agreements subject to master repurchase agreements (MRA) and securities borrowing and lending agreements subject to master securities lending agreements (MSLA). We account for transactions subject to these agreements as collateralized financings, and those with a single counterparty are presented net on our balance sheet, provided certain criteria are met that permit balance sheet netting. Most transactions subject to these agreements do not meet those criteria and thus are not eligible for balance sheet netting.

Collateral we pledged consists of non-cash instruments, such as securities or loans, and is not netted on the balance sheet against the related liability. Collateral we received includes securities or loans and is not recognized on our balance sheet. Collateral pledged or received may be increased or decreased over time to maintain certain contractual thresholds, as the assets underlying each arrangement fluctuate in value. Generally, these agreements require collateral to exceed the asset or liability recognized on the balance sheet. The following table includes the amount of collateral pledged or received related to exposures subject to enforceable MRAs or MSLAs. While these agreements are typically over-collateralized, U.S. GAAP requires disclosure in this table to limit the reported amount of such collateral to the amount of the related recognized asset or liability for each counterparty.

In addition to the amounts included in Table 13.3, we also have balance sheet netting related to derivatives that is disclosed in Note 15 (Derivatives).

Table 13.3: Offsetting – Securities Financing Activities

(in millions)		Jun 30, 2019	Dec 31, 2018
Assets:			
Resale and securities borrowing agreements			
Gross amounts recognized	$	**146,096**	112,662
Gross amounts offset in consolidated balance sheet (1)		**(15,248)**	(15,258)
Net amounts in consolidated balance sheet (2)		**130,848**	97,404
Collateral not recognized in consolidated balance sheet (3)		**(130,082)**	(96,734)
Net amount (4)	$	**766**	670
Liabilities:			
Repurchase and securities lending agreements			
Gross amounts recognized (5)	$	**116,900**	106,248
Gross amounts offset in consolidated balance sheet (1)		**(15,248)**	(15,258)
Net amounts in consolidated balance sheet (6)		**101,652**	90,990
Collateral pledged but not netted in consolidated balance sheet (7)		**(101,476)**	(90,798)
Net amount (8)	$	**176**	192

(1) Represents recognized amount of resale and repurchase agreements with counterparties subject to enforceable MRAs that have been offset in the consolidated balance sheet.
(2) Includes $112.1 billion and $80.1 billion classified on our consolidated balance sheet in federal funds sold and securities purchased under resale agreements at June 30, 2019, and December 31, 2018, respectively. Also includes securities purchased under long-term resale agreements (generally one year or more) classified in loans, which totaled $18.8 billion and $17.3 billion, at June 30, 2019, and December 31, 2018, respectively.
(3) Represents the fair value of collateral we have received under enforceable MRAs or MSLAs, limited for table presentation purposes to the amount of the recognized asset due from each counterparty. At June 30, 2019, and December 31, 2018, we have received total collateral with a fair value of $157.4 billion and $123.1 billion, respectively, all of which, we have the right to sell or repledge. These amounts include securities we have sold or repledged to others with a fair value of $73.4 billion at June 30, 2019, and $60.8 billion at December 31, 2018.
(4) Represents the amount of our exposure that is not collateralized and/or is not subject to an enforceable MRA or MSLA.
(5) For additional information on underlying collateral and contractual maturities, see the "Repurchase and Securities Lending Agreements" section in this Note.
(6) Amount is classified in short-term borrowings on our consolidated balance sheet.
(7) Represents the fair value of collateral we have pledged, related to enforceable MRAs or MSLAs, limited for table presentation purposes to the amount of the recognized liability owed to each counterparty. At June 30, 2019, and December 31, 2018, we have pledged total collateral with a fair value of $119.6 billion and $108.8 billion, respectively, of which, the counterparty does not have the right to sell or repledge $3.5 billion as of June 30, 2019 and $4.4 billion as of December 31, 2018.
(8) Represents the amount of our obligation that is not covered by pledged collateral and/or is not subject to an enforceable MRA or MSLA.

REPURCHASE AND SECURITIES LENDING AGREEMENTS
Securities sold under repurchase agreements and securities lending arrangements are effectively short-term collateralized borrowings. In these transactions, we receive cash in exchange for transferring securities as collateral and recognize an obligation to reacquire the securities for cash at the transaction's maturity. These types of transactions create risks, including (1) the counterparty may fail to return the securities at maturity, (2) the fair value of the securities transferred may decline below the amount of our obligation to reacquire the securities, and therefore create an obligation for us to pledge additional amounts, and (3) the counterparty may accelerate the maturity on demand, requiring us to reacquire the security prior to contractual maturity. We attempt to mitigate these risks in various ways. Most of our collateral consists of highly liquid securities. In addition, we underwrite and monitor the financial strength of our counterparties, monitor the fair value of collateral pledged relative to contractually required repurchase amounts, and monitor that our collateral is properly returned through the clearing and settlement process in advance of our cash repayment. Table 13.4 provides the gross amounts recognized on the balance sheet (before the effects of offsetting) of our liabilities for repurchase and securities lending agreements disaggregated by underlying collateral type.

Table 13.4: Underlying Collateral Types of Gross Obligations

(in millions)		Jun 30, 2019	Dec 31, 2018
Repurchase agreements:			
Securities of U.S. Treasury and federal agencies	$	**49,622**	38,408
Securities of U.S. States and political subdivisions		**97**	159
Federal agency mortgage-backed securities		**43,346**	47,241
Non-agency mortgage-backed securities		**1,754**	1,875
Corporate debt securities		**8,132**	6,191
Asset-backed securities		**2,258**	2,074
Equity securities		**2,034**	992
Other		**866**	340
Total repurchases		**108,109**	97,280
Securities lending arrangements:			
Securities of U.S. Treasury and federal agencies		**198**	222
Federal agency mortgage-backed securities		**—**	2
Corporate debt securities		**483**	389
Equity securities (1)		**8,094**	8,349
Other		**16**	6
Total securities lending		**8,791**	8,968
Total repurchases and securities lending	$	**116,900**	106,248

(1) Equity securities are generally exchange traded and either re-hypothecated under margin lending agreements or obtained through contemporaneous securities borrowing transactions with other counterparties.

Table 13.5 provides the contractual maturities of our gross obligations under repurchase and securities lending agreements.

Table 13.5: Contractual Maturities of Gross Obligations

(in millions)		Overnight/ continuous	Up to 30 days	30-90 days	>90 days	Total gross obligation
June 30, 2019						
Repurchase agreements	**$**	**96,487**	**3,565**	**3,938**	**4,119**	**108,109**
Securities lending arrangements		**8,643**	**—**	**148**	**—**	**8,791**
Total repurchases and securities lending (1)	**$**	**105,130**	**3,565**	**4,086**	**4,119**	**116,900**
December 31, 2018						
Repurchase agreements	$	86,574	3,244	2,153	5,309	97,280
Securities lending arrangements		8,669	—	299	—	8,968
Total repurchases and securities lending (1)	$	95,243	3,244	2,452	5,309	106,248

(1) Securities lending is executed under agreements that allow either party to terminate the transaction without notice, while repurchase agreements have a term structure to them that technically matures at a point in time. The overnight/continuous repurchase agreements require election of both parties to roll the trade rather than the election to terminate the arrangement as in securities lending.

OTHER COMMITMENTS To meet the financing needs of our customers, we may enter into commitments to purchase debt and equity securities to provide capital for their funding, liquidity or other future needs. As of June 30, 2019, and December 31, 2018, we had commitments to purchase debt securities of $212 million and $335 million, respectively, and commitments to purchase equity securities of $2.1 billion and $2.5 billion, respectively.

As part of maintaining our memberships in certain clearing organizations, we are required to stand ready to provide liquidity to sustain market clearing activity in the event unforeseen events occur or are deemed likely to occur. Certain of these obligations are guarantees of other members' performance and accordingly are included in Other guarantees in Table 13.1.

Also, we have commitments to purchase securities under resale agreements from central clearing organizations. We do not have any outstanding amounts funded, and the amount of our unfunded contractual commitments was $5.1 billion and $9.8 billion as of June 30, 2019, and December 31, 2018, respectively. Given the nature of these commitments, they are excluded from Table 6.4 (Unfunded Credit Commitments) in Note 6 (Loans and Allowance for Credit Losses).

The Parent fully and unconditionally guarantees the payment of principal, interest, and any other amounts that may be due on securities that its 100% owned finance subsidiary, Wells Fargo Finance LLC, may issue. These guaranteed liabilities were $545 million and $5 million at June 30, 2019 and December 31, 2018, respectively. These guarantees rank on parity with all of the Parent's other unsecured and unsubordinated indebtedness.

Note 14: Legal Actions

Wells Fargo and certain of our subsidiaries are involved in a number of judicial, regulatory, governmental, arbitration, and other proceedings or investigations concerning matters arising from the conduct of our business activities, and many of those proceedings and investigations expose Wells Fargo to potential financial loss. These proceedings and investigations include actions brought against Wells Fargo and/or our subsidiaries with respect to corporate-related matters and transactions in which Wells Fargo and/or our subsidiaries were involved. In addition, Wells Fargo and our subsidiaries may be requested to provide information or otherwise cooperate with government authorities in the conduct of investigations of other persons or industry groups.

Although there can be no assurance as to the ultimate outcome, Wells Fargo and/or our subsidiaries have generally denied, or believe we have a meritorious defense and will deny, liability in all significant legal actions pending against us, including the matters described below, and we intend to defend vigorously each case, other than matters we describe as having settled. We establish accruals for legal actions when potential losses associated with the actions become probable and the costs can be reasonably estimated. For such accruals, we record the amount we consider to be the best estimate within a range of potential losses that are both probable and estimable; however, if we cannot determine a best estimate, then we record the low end of the range of those potential losses. The actual costs of resolving legal actions may be substantially higher or lower than the amounts accrued for those actions.

ATM ACCESS FEE LITIGATION In October 2011, plaintiffs filed a putative class action, *Mackmin, et al. v. Visa, Inc. et al.*, against Wells Fargo & Company, Wells Fargo Bank, N.A., Visa, MasterCard, and several other banks in the United States District Court for the District of Columbia. Plaintiffs allege that the Visa and MasterCard requirement that if an ATM operator charges an access fee on Visa and MasterCard transactions, then that fee cannot be greater than the access fee charged for transactions on other networks, violates antitrust rules. Plaintiffs seek treble damages, restitution, injunctive relief, and attorneys' fees where available under federal and state law. Two other antitrust cases that make similar allegations were filed in the same court, but these cases did not name Wells Fargo as a defendant. On February 13, 2013, the district court granted defendants' motions to dismiss the three actions. Plaintiffs appealed the dismissals and, on August 4, 2015, the United States Court of Appeals for the District of Columbia Circuit vacated the district court's decisions and remanded the three cases to the district court for further proceedings. On June 28, 2016, the United States Supreme Court granted defendants' petitions for writ of certiorari to review the decisions of the United States Court of Appeals for the District of Columbia. On November 17, 2016, the United States Supreme Court dismissed the petitions as improvidently granted, and the three cases returned to the district court for further proceedings.

AUTOMOBILE LENDING MATTERS On April 20, 2018, the Company entered into consent orders with the Office of the Comptroller of the Currency (OCC) and the Consumer Financial Protection Bureau (CFPB) to resolve, among other things, investigations by the agencies into the Company's compliance risk management program and its past practices involving certain automobile collateral protection insurance (CPI) policies and, as discussed below, certain mortgage interest rate lock extensions. The consent orders require remediation to customers and the payment of a total of $1.0 billion in civil money penalties to the agencies. In July 2017, the Company announced a plan to remediate customers who may have been financially harmed due to issues related to automobile CPI policies purchased through a third-party vendor on their behalf. Multiple putative class action cases alleging, among other things, unfair and deceptive practices relating to these CPI policies, have been filed against the Company and consolidated into one multi-district litigation in the United States District Court for the Central District of California. The Company has reached an agreement in principle to resolve the multi-district litigation pursuant to which the Company has agreed to pay, consistent with its remediation obligations under the consent orders, approximately $424 million in remediation to customers with CPI policies placed between October 15, 2005, and September 30, 2016. The settlement amount is not incremental to the Company's remediation obligations under the consent orders, but instead encompasses those obligations, including remediation payments to date. The settlement amount is subject to change as the Company finalizes its remediation activity under the consent orders. In addition, the Company has agreed to contribute $1 million to a common fund for the class. The district court scheduled a preliminary approval hearing for August 5, 2019. A putative class of shareholders also filed a securities fraud class action against the Company and its executive officers alleging material misstatements and omissions of CPI-related information in the Company's public disclosures. Former team members have also alleged retaliation for raising concerns regarding automobile lending practices. In addition, the Company has identified certain issues related to the unused portion of guaranteed automobile protection (GAP) waiver or insurance agreements between the customer and dealer and, by assignment, the lender, which will require remediation to customers in certain states. The Company is subject to a class action lawsuit in the United States District Court for the Central District of California alleging that customers are entitled to refunds in all states. Allegations related to the CPI and GAP programs are among the subjects of shareholder derivative lawsuits pending in federal and state court in California. The court dismissed the state court action in September 2018, but plaintiffs filed an amended complaint in November 2018. The parties to the state court action have entered into an agreement to resolve the action pursuant to which the Company will pay plaintiffs' attorneys' fees and undertake certain business and governance practices. The court granted preliminary approval of the settlement on July 12, 2019, and scheduled a final approval hearing for October 9, 2019. These and other issues related to the origination, servicing, and collection of consumer automobile loans, including related insurance products, have also subjected the Company to formal or informal inquiries, investigations, or examinations from federal and state government agencies. In December 2018, the Company entered into an agreement with all 50 state Attorneys General and the District of Columbia to resolve an investigation into the Company's retail sales practices, CPI and GAP, and mortgage interest rate lock matters, pursuant to which the Company paid $575 million.

CONSUMER DEPOSIT ACCOUNT RELATED REGULATORY INVESTIGATION The CFPB is conducting an investigation into whether customers were unduly harmed by the Company's historical practices associated with the freezing (and, in many cases, closing) of consumer deposit accounts after the Company detected suspected fraudulent activity (by third parties or account holders) that affected those accounts. A former team member has brought a state court action alleging retaliation for raising concerns about these practices.

FIDUCIARY AND CUSTODY ACCOUNT FEE CALCULATIONS Federal government agencies are conducting formal or informal inquiries, investigations, or examinations regarding fee calculations within certain fiduciary and custody accounts in the Company's investment and fiduciary services business, which is part of the wealth management business within the Wealth and Investment Management (WIM) operating segment. The Company has determined that there have been instances of incorrect fees being applied to certain assets and accounts, resulting in both overcharges and undercharges to customers.

FOREIGN EXCHANGE BUSINESS Federal government agencies, including the United States Department of Justice (Department of Justice), are investigating or examining certain activities in the Company's foreign exchange business. These matters are at varying stages. The Company has responded, and continues to respond, to requests from a number of the foregoing and has discussed the potential resolution of some of the matters. The Company is in the process of providing remediation to customers that may have received pricing inconsistent with commitments made to those customers, and rebates to customers where historic pricing, while consistent with contracts entered into with those customers, does not conform to recently implemented pricing review standards for prior periods.

INTERCHANGE LITIGATION Plaintiffs representing a putative class of merchants have filed putative class actions, and individual merchants have filed individual actions, against Wells Fargo Bank, N.A., Wells Fargo & Company, Wachovia Bank, N.A., and Wachovia Corporation regarding the interchange fees associated with Visa and MasterCard payment card transactions. Visa, MasterCard, and several other banks and bank holding companies are also named as defendants in these actions. These actions have been consolidated in the United States District Court for the Eastern District of New York. The amended and consolidated complaint asserts claims against defendants based on alleged violations of federal and state antitrust laws and seeks damages, as well as injunctive relief. Plaintiff merchants allege that Visa, MasterCard, and payment card issuing banks unlawfully colluded to set interchange rates. Plaintiffs also allege that enforcement of certain Visa and MasterCard rules and alleged tying and bundling of services offered to merchants are anticompetitive. Wells Fargo and Wachovia, along with other defendants and entities, are parties to Loss and Judgment Sharing Agreements, which provide that they, along with other entities, will share, based on a formula, in any losses from the Interchange Litigation. On July 13, 2012, Visa, MasterCard, and the financial institution defendants, including Wells Fargo, signed a memorandum of understanding with plaintiff merchants to resolve the consolidated class action and reached a separate settlement in principle of the consolidated individual actions. The settlement payments to be made by all defendants in the consolidated class and individual actions totaled approximately $6.6 billion before reductions applicable to certain merchants opting out of the settlement. The class settlement also provided for the distribution to class merchants of 10 basis points of default interchange across all credit rate categories for a period of eight consecutive months. The district court granted final approval of the settlement, which was appealed to the United States Court of Appeals for the Second Circuit by settlement objector merchants. Other merchants opted out of the settlement and are pursuing several individual actions. On June 30, 2016, the Second Circuit vacated the settlement agreement and reversed and remanded the consolidated action to the United States District Court for the Eastern District of New York for further proceedings. On November 23, 2016, prior class counsel filed a petition to the United States Supreme Court, seeking review of the reversal of the settlement by the Second Circuit, and the Supreme Court denied the petition on March 27, 2017. On November 30, 2016, the district court appointed lead class counsel for a damages class and an equitable relief class. The parties have entered into a settlement agreement to resolve the money damages class claims pursuant to which defendants will pay a total of approximately $6.2 billion, which includes approximately $5.3 billion of funds remaining from the 2012 settlement and $900 million in additional funding. The Company's allocated responsibility for the additional funding is approximately $94.5 million. The court granted preliminary approval of the settlement in January 2019, and scheduled a final approval hearing for November 7, 2019. Several of the opt-out and direct action litigations were settled during the pendency of the Second Circuit appeal while others remain pending. Discovery is proceeding in the opt-out litigations and the equitable relief class case.

LOW INCOME HOUSING TAX CREDITS Federal government agencies have undertaken formal or informal inquiries or investigations regarding the manner in which the Company purchased, and negotiated the purchase of, certain federal low income housing tax credits in connection with the financing of low income housing developments.

MOBILE DEPOSIT PATENT LITIGATION The Company is a defendant in two separate cases brought by United Services Automobile Association (USAA) in the United States District Court for the Eastern District of Texas alleging claims of patent infringement regarding mobile deposit capture technology patents held by USAA. Trial in the first case is scheduled for November 2019 and trial in the second case is scheduled for January 2020.

MORTGAGE INTEREST RATE LOCK MATTERS On April 20, 2018, the Company entered into consent orders with the OCC and CFPB to resolve, among other things, investigations by the agencies into the Company's compliance risk management program and its past practices involving certain automobile CPI policies and certain mortgage interest rate lock extensions. The consent orders require remediation to customers and the payment of a total of $1.0 billion in civil money penalties to the agencies. The Company was named in a putative class action, filed in the United States District Court for the Northern District of California, alleging violations of federal and state consumer fraud statutes relating to mortgage rate lock extension fees. The Company filed a motion to dismiss and the court granted the motion. Subsequently, a putative class action was filed in the United States District Court for the District of Oregon, raising similar allegations. The Company filed a motion to dismiss this action and the court granted the motion. In addition, former team members have asserted claims, including in pending litigation, that they were terminated for raising concerns regarding mortgage interest rate lock extension practices. Allegations related to mortgage interest rate lock extension fees are also among the subjects of two shareholder derivative lawsuits consolidated in California state court. The parties have entered into an agreement to resolve the state court action pursuant to which the Company will pay plaintiffs' attorneys' fees and undertake certain business and governance practices. The court granted preliminary approval of the settlement on July 12, 2019, and scheduled a final approval hearing for October 9, 2019. This matter has also subjected the Company to formal or informal inquiries, investigations or examinations from other federal and state government agencies. In December 2018, the Company entered into an agreement with all 50 state Attorneys General and the District of Columbia to resolve an investigation into the Company's retail sales practices, CPI and GAP, and mortgage interest rate lock matters, pursuant to which the Company paid $575 million.

MORTGAGE LOAN MODIFICATION LITIGATION Plaintiffs representing a putative class of mortgage borrowers have filed separate putative class actions, *Hernandez v. Wells Fargo, et al.*, and *Coordes v. Wells Fargo, et al.*, against Wells Fargo Bank, N.A. in the United States District Court for the Northern District of California and the United States District Court for the District of Washington, respectively. Plaintiffs allege that Wells Fargo improperly denied mortgage loan modifications or repayment plans to customers in the foreclosure process due to the overstatement of foreclosure attorneys' fees that were included for purposes of determining whether a customer in the foreclosure process qualified for a mortgage loan modification or repayment plan.

MORTGAGE-RELATED REGULATORY INVESTIGATIONS Federal and state government agencies, including the Department of Justice, have been investigating or examining certain mortgage related activities of Wells Fargo and predecessor institutions. Wells Fargo, for itself and for predecessor institutions, has responded, or continues to respond, to requests from these agencies seeking information regarding the origination, underwriting, and securitization of residential mortgages, including sub-prime mortgages. These agencies have advanced theories of purported liability with respect to certain of these activities. An agreement, pursuant to which the Company paid $2.09 billion, was reached in August 2018 to resolve the Department of Justice investigation, which related to certain 2005-2007 residential mortgage-backed securities activities. In addition, the Company reached an agreement with the Attorney General of the State of Illinois in November 2018 pursuant to which the Company paid $17 million in restitution to certain Illinois state pension funds to resolve a claim relating to certain residential mortgage-backed securities activities. Other financial institutions have entered into similar settlements with these agencies, the nature of which related to the specific activities of those financial institutions, including the imposition of significant financial penalties and remedial actions.

OFAC RELATED INVESTIGATION The Company has self-identified an issue whereby certain foreign banks utilized a Wells Fargo software-based solution to conduct import/export trade-related financing transactions with countries and entities prohibited by the Office of Foreign Assets Control (OFAC) of the United States Department of the Treasury. We do not believe any funds related to these transactions flowed through accounts at Wells Fargo as a result of the aforementioned conduct. The Company has made voluntary self-disclosures to OFAC and is cooperating with an inquiry from the Department of Justice.

ORDER OF POSTING LITIGATION Plaintiffs filed a series of putative class actions against Wachovia Bank, N.A. and Wells Fargo Bank, N.A., as well as many other banks, challenging the "high to low" order in which the banks post debit card transactions to consumer deposit accounts. Most of these actions were consolidated in multi-district litigation proceedings (MDL proceedings) in the United States District Court for the Southern District of Florida. The court in the MDL proceedings has certified a class of putative plaintiffs, and Wells Fargo moved to compel arbitration of the claims of unnamed class members. The court denied the motions to compel arbitration in October 2016, and Wells Fargo appealed this decision to the United States Court of Appeals for the Eleventh Circuit. In May 2018, the Eleventh Circuit ruled in Wells Fargo's favor and found that Wells Fargo had not waived its arbitration rights and remanded the case to the district court for further proceedings. Plaintiffs filed a petition for rehearing to the Eleventh Circuit, which was denied in August 2018. Plaintiffs petitioned for certiorari from the United States Supreme Court, and that petition was denied in January 2019. The case has returned to the district court for further proceedings.

RETAIL SALES PRACTICES MATTERS Federal, state, and local government agencies, including the Department of Justice, the United States Securities and Exchange Commission (SEC), and the United States Department of Labor; state attorneys general, including the New York Attorney General; and prosecutors' offices, as well as Congressional committees, have undertaken formal or informal inquiries, investigations or examinations arising out of certain retail sales practices of the Company that were the subject of settlements with the CFPB, the OCC, and the Office of the Los Angeles City Attorney announced by the Company on September 8, 2016. These matters are at varying stages. The Company has responded, and continues to respond, to requests from a number of the foregoing. In October 2018, the Company entered into an agreement to resolve the New York Attorney General's investigation pursuant to which the Company paid $65 million to the State of New York. In December 2018, the Company entered into an agreement with all 50 state Attorneys General and the District of Columbia to resolve an investigation into the Company's retail sales practices, CPI and GAP, and mortgage interest rate lock matters, pursuant to which the Company paid $575 million. The Company has also engaged in preliminary and/or exploratory resolution discussions with the Department of Justice and the SEC, although there can be no assurance as to the outcome of these discussions.

In addition, a number of lawsuits have also been filed by non-governmental parties seeking damages or other remedies related to these retail sales practices. First, various class plaintiffs purporting to represent consumers who allege that they received products or services without their authorization or consent have brought separate putative class actions against the Company in the United States District Court for the Northern District of California and various other jurisdictions. In April 2017, the Company entered into a settlement agreement in the first-filed action, *Jabbari v. Wells Fargo Bank, N.A.*, to resolve claims regarding certain products or services provided without authorization or consent for the time period May 1, 2002 to April 20, 2017. Pursuant to the settlement, the Company will pay $142 million for remediation, attorneys' fees, and settlement fund claims administration. In the unlikely event that the $142 million settlement total is not enough to provide remediation, pay attorneys' fees, pay settlement fund claims administration costs, and have at least $25 million left over to distribute to all class members, the Company will contribute additional funds to the settlement. In addition, in the unlikely event that the number of unauthorized accounts identified by settlement class members in the claims process and not disputed by the claims administrator exceeds plaintiffs' 3.5 million account estimate, the Company will proportionately increase the $25 million reserve so that the ratio of reserve to unauthorized accounts is no less than what was implied by plaintiffs' estimate at the time of the district court's preliminary approval of the settlement in July 2017. The district court issued an order granting final approval of the settlement on June 14, 2018. Several appeals of the district court's order granting final approval of the settlement have been filed with the United States Court of Appeals for the Ninth Circuit. Second, Wells Fargo shareholders brought a consolidated securities fraud class action in the United States District Court for the Northern District of California alleging certain misstatements and omissions in the Company's disclosures related to sales practices matters. The Company entered into a settlement agreement to resolve this matter pursuant to which the Company paid $480 million. The district court issued an order granting final approval of the settlement on December 20, 2018. Third, Wells Fargo shareholders have brought numerous shareholder derivative lawsuits asserting breach of fiduciary duty claims, among others, against current and former directors and officers for their alleged involvement with and failure to detect and prevent sales practices issues. These actions are currently pending in the United States District Court for the Northern District of California and California state court for coordinated proceedings. An additional lawsuit asserting similar claims pending in Delaware state court has been stayed. The parties have entered into settlement agreements to resolve the shareholder derivative lawsuits pursuant to which insurance carriers will pay the Company approximately $240 million for alleged damage to the Company, and the Company will pay plaintiffs' attorneys' fees. Preliminary approval of the settlements has been granted, and the federal court held a final approval hearing on August 1, 2019, and the state court scheduled a final approval hearing for October 9, 2019. Fourth, multiple employment litigation matters have been brought against Wells Fargo, including an Employee Retirement Income Security Act (ERISA) class action in the United States District Court for the District of Minnesota on behalf of 401(k) plan participants that has been dismissed and is now on appeal; a class action in the United States District Court for the Northern District of California on behalf of team members who allege that they protested sales practice misconduct and/or were terminated for not meeting sales goals that has now been dismissed, and we have entered into a framework with plaintiffs' counsel to address individual claims that have been asserted; various wage and hour class actions brought in federal and state court in California and Pennsylvania (which have been settled), and in New Jersey on behalf of non-exempt branch based team members alleging that sales pressure resulted in uncompensated overtime; and multiple single plaintiff Sarbanes-Oxley Act complaints and state law whistleblower actions filed with the United States Department of Labor or in various state courts alleging adverse employment actions for raising sales practice misconduct issues.

RMBS TRUSTEE LITIGATION In November 2014, a group of institutional investors (Institutional Investor Plaintiffs), including funds affiliated with BlackRock, Inc., filed a putative class action in the United States District Court for the Southern District of New York against Wells Fargo Bank, N.A., alleging claims against the Company in its capacity as trustee for a number of residential mortgage-backed securities (RMBS) trusts (Federal Court Complaint). Similar complaints have been filed against other trustees in various courts, including in the Southern District of New York, in New York state court, and in other states, by RMBS investors. The Federal Court Complaint alleged that Wells Fargo Bank, N.A., as trustee, caused losses to investors and asserted causes of action based upon, among other things, the trustee's alleged failure to notify and enforce repurchase obligations of mortgage loan sellers for purported breaches of representations and warranties, notify investors of alleged events of default, and abide by appropriate standards of care following alleged events of default. Plaintiffs sought money damages in an unspecified amount, reimbursement of expenses, and equitable relief. In December 2014 and December 2015, certain other investors filed four complaints alleging similar claims against Wells Fargo Bank, N.A. in the Southern District of New York (Related Federal Cases). In January 2016, the Southern District of New York entered an order in connection with the Federal Court Complaint dismissing claims related to certain of the trusts at issue (Dismissed Trusts). The Company's subsequent motion to dismiss the Federal Court Complaint and the complaints for the Related Federal Cases was granted in part and denied in part in March 2017. In May 2017, the Company filed third-party complaints against certain investment advisors affiliated with the Institutional Investor Plaintiffs seeking contribution with respect to claims alleged in the Federal Court Complaint (Third-Party Claims).

In December 2016, the Institutional Investor Plaintiffs filed a new putative class action complaint in New York state court in respect of 261 RMBS trusts, including the Dismissed Trusts, for which Wells Fargo Bank, N.A. serves or served as trustee (State Court Action). A complaint raising similar allegations to those in the Federal Court Complaint was filed in May 2016 in New York state court by IKB International and IKB Deutsche Industriebank (IKB Action).

In July 2017, certain of the plaintiffs from the State Court Action filed a civil complaint relating to Wells Fargo Bank, N.A.'s setting aside reserves for legal fees and expenses in connection with the liquidation of eleven RMBS trusts at issue in the State Court Action (Declaratory Judgment Action). The complaint sought, among other relief, declarations that the Company is not entitled to indemnification, the advancement of funds, or the taking of reserves from trust funds for legal fees and expenses it incurs in defending the claims in the State Court Action.

In May 2019, the New York state court approved a settlement agreement among the Institutional Investor Plaintiffs and the Company pursuant to which, among other terms, the Company paid $43 million to resolve the Federal Court Complaint and the State Court Action. The settlement also resolved the Third Party Claims and the Declaratory Judgment Action. The settlement did not affect the Related Federal Cases or the IKB Action, which remain pending.

SEMINOLE TRIBE TRUSTEE LITIGATION The Seminole Tribe of Florida filed a complaint in Florida state court alleging that Wells Fargo, as trustee, charged excess fees in connection with the administration of a minor's trust and failed to invest the assets of the trust prudently. The complaint was later amended to include three individual current and former beneficiaries as plaintiffs and to remove the Tribe as a party to the case. In December 2016, the Company filed a motion to dismiss the amended complaint on the grounds that the Tribe is a necessary party and that the individual beneficiaries lack standing to bring claims. The motion was denied in June 2018. Trial is scheduled for February 2020.

WHOLESALE BANKING CONSENT ORDER INVESTIGATION
On November 19, 2015, the Company entered into a consent order with the OCC, pursuant to which the Wholesale Banking group was required to implement customer due diligence standards that include collection of current beneficial ownership information for certain business customers. The Company is responding to inquiries from various federal government agencies regarding potentially inappropriate conduct in connection with the collection of beneficial ownership information.

OUTLOOK As described above, the Company establishes accruals for legal actions when potential losses associated with the actions become probable and the costs can be reasonably estimated. The high end of the range of reasonably possible potential losses in excess of the Company's accrual for probable and estimable losses was approximately $3.9 billion as of June 30, 2019. The increase in the high end of the range from March 31, 2019, was due to a variety of matters, including retail sales practices matters. The outcomes of legal actions are unpredictable and subject to significant uncertainties, and it is inherently difficult to determine whether any loss is probable or even possible. It is also inherently difficult to estimate the amount of any loss and there may be matters for which a loss is probable or reasonably possible but not currently estimable. Accordingly, actual losses may be in excess of the established accrual or the range of reasonably possible loss. Wells Fargo is unable to determine whether the ultimate resolution of the retail sales practices matters will have a material adverse effect on its consolidated financial condition. Based on information currently available, advice of counsel, available insurance coverage, and established reserves, Wells Fargo believes that the eventual outcome of other actions against Wells Fargo and/or its subsidiaries will not, individually or in the aggregate, have a material adverse effect on Wells Fargo's consolidated financial condition. However, it is possible that the ultimate resolution of a matter, if unfavorable, may be material to Wells Fargo's results of operations for any particular period.

Note 15: Derivatives

We use derivatives to manage exposure to market risk, including interest rate risk, credit risk and foreign currency risk, and to assist customers with their risk management objectives. We designate certain derivatives as hedging instruments in a qualifying hedge accounting relationship (fair value or cash flow hedge). Our remaining derivatives consist of economic hedges that do not qualify for hedge accounting, and derivatives held for customer accommodation trading or other purposes. For more information on our derivative activities, see Note 17 (Derivatives) in our 2018 Form 10-K.

Table 15.1 presents the total notional or contractual amounts and fair values for our derivatives. Derivative transactions can be measured in terms of the notional amount, but this amount is not recorded on the balance sheet and is not, when viewed in isolation, a meaningful measure of the risk profile of the instruments. The notional amount is generally not exchanged but is used only as the basis on which interest and other payments are determined.

Table 15.1: Notional or Contractual Amounts and Fair Values of Derivatives

	June 30, 2019			December 31, 2018		
		Fair value			Fair value	
(in millions)	Notional or contractual amount	Derivative assets	Derivative liabilities	Notional or contractual amount	Derivative assets	Derivative liabilities
Derivatives designated as hedging instruments						
Interest rate contracts	$ 186,206	2,559	1,368	177,511	2,237	636
Foreign exchange contracts (1)	33,439	540	1,162	34,176	573	1,376
Total derivatives designated as qualifying hedging instruments		3,099	2,530		2,810	2,012
Derivatives not designated as hedging instruments						
Economic hedges:						
Interest rate contracts (2)	255,760	692	290	173,215	849	369
Equity contracts	17,374	1,213	658	13,920	1,362	79
Foreign exchange contracts	20,829	212	85	19,521	225	80
Credit contracts – protection purchased	220	38	—	100	27	—
Subtotal		2,155	1,033		2,463	528
Customer accommodation trading and other derivatives:						
Interest rate contracts	11,130,569	22,302	18,979	9,162,821	15,349	15,303
Commodity contracts	72,255	1,424	1,936	66,173	1,588	2,336
Equity contracts	246,045	6,164	8,520	217,890	6,183	5,931
Foreign exchange contracts	353,918	4,803	5,021	364,982	5,916	5,657
Credit contracts – protection sold	10,507	15	80	11,741	76	182
Credit contracts – protection purchased	20,784	88	17	20,880	175	98
Subtotal		34,796	34,553		29,287	29,507
Total derivatives not designated as hedging instruments		36,951	35,586		31,750	30,035
Total derivatives before netting		40,050	38,116		34,560	32,047
Netting (3)		(26,888)	(29,717)		(23,790)	(23,548)
Total		$ 13,162	8,399		10,770	8,499

(1) The notional amount for foreign exchange contracts at June 30, 2019, and December 31, 2018, excludes $10.0 billion and $11.2 billion, respectively, for certain derivatives that are combined for designation as a hedge on a single instrument.
(2) Includes economic hedge derivatives used to hedge the risk of changes in the fair value of residential MSRs, MLHFS, loans, derivative loan commitments and other interests held.
(3) Represents balance sheet netting of derivative asset and liability balances, related cash collateral and portfolio level counterparty valuation adjustments. See Table 15.2 for further information.

Table 15.2 provides information on the gross fair values of derivative assets and liabilities, the balance sheet netting adjustments and the resulting net fair value amount recorded on our balance sheet, as well as the non-cash collateral associated with such arrangements. We execute substantially all of our derivative transactions under master netting arrangements and reflect all derivative balances and related cash collateral subject to enforceable master netting arrangements on a net basis within the balance sheet. The "Gross amounts recognized" column in the following table includes $35.1 billion and $34.9 billion of gross derivative assets and liabilities, respectively, at June 30, 2019, and $30.9 billion and $28.4 billion, respectively, at December 31, 2018, with counterparties subject to enforceable master netting arrangements that are carried on the balance sheet net of offsetting amounts. The remaining gross derivative assets and liabilities of $5.0 billion and $3.2 billion, respectively, at June 30, 2019, and $3.7 billion and $3.6 billion, respectively, at December 31, 2018, include those with counterparties subject to master netting arrangements for which we have not assessed the enforceability because they are with counterparties where we do not currently have positions to offset, those subject to master netting arrangements where we have not been able to confirm the enforceability and those not subject to master netting arrangements. As such, we do not net derivative balances or collateral within the balance sheet for these counterparties.

We determine the balance sheet netting adjustments based on the terms specified within each master netting arrangement. We disclose the balance sheet netting amounts within the column titled "Gross amounts offset in consolidated balance sheet." Balance sheet netting adjustments are determined at the counterparty level for which there may be multiple contract types. For disclosure purposes, we allocate these netting adjustments to the contract type for each counterparty proportionally based upon the "Gross amounts recognized" by counterparty. As a result, the net amounts disclosed by contract type may not represent the actual exposure upon settlement of the contracts.

We do not net non-cash collateral that we receive and pledge on the balance sheet. For disclosure purposes, we present the fair value of this non-cash collateral in the column titled "Gross amounts not offset in consolidated balance sheet (Disclosure-only netting)" within the table. We determine and allocate the Disclosure-only netting amounts in the same manner as balance sheet netting amounts.

The "Net amounts" column within Table 15.2 represents the aggregate of our net exposure to each counterparty after considering the balance sheet and Disclosure-only netting adjustments. We manage derivative exposure by monitoring the credit risk associated with each counterparty using counterparty specific credit risk limits, using master netting arrangements and obtaining collateral. Derivative contracts executed in over-the-counter markets include bilateral contractual arrangements that are not cleared through a central clearing organization but are typically subject to master netting arrangements. The percentage of our bilateral derivative transactions outstanding at period end in such markets, based on gross fair value, is provided within the following table. Other derivative contracts executed in over-the-counter or exchange-traded markets are settled through a central clearing organization and are excluded from this percentage. In addition to the netting amounts included in the table, we also have balance sheet netting related to resale and repurchase agreements that are disclosed within Note 13 (Guarantees, Pledged Assets and Collateral, and Other Commitments).

Table 15.2: Gross Fair Values of Derivative Assets and Liabilities

(in millions)		Gross amounts recognized	Gross amounts offset in consolidated balance sheet (1)	Net amounts in consolidated balance sheet	Gross amounts not offset in consolidated balance sheet (Disclosure-only netting) (2)	Net amounts	Percent exchanged in over-the-counter market (3)
June 30, 2019							
Derivative assets							
Interest rate contracts	**$**	**25,553**	**(16,558)**	**8,995**	**(313)**	**8,682**	**95%**
Commodity contracts		**1,424**	**(951)**	**473**	**(1)**	**472**	**73**
Equity contracts		**7,377**	**(5,041)**	**2,336**	**(34)**	**2,302**	**71**
Foreign exchange contracts		**5,555**	**(4,250)**	**1,305**	**(8)**	**1,297**	**100**
Credit contracts – protection sold		**15**	**(9)**	**6**	**—**	**6**	**74**
Credit contracts – protection purchased		**126**	**(79)**	**47**	**(1)**	**46**	**99**
Total derivative assets	**$**	**40,050**	**(26,888)**	**13,162**	**(357)**	**12,805**	
Derivative liabilities							
Interest rate contracts	**$**	**20,637**	**(18,046)**	**2,591**	**(848)**	**1,743**	**95%**
Commodity contracts		**1,936**	**(738)**	**1,198**	**—**	**1,198**	**81**
Equity contracts		**9,178**	**(5,934)**	**3,244**	**(214)**	**3,030**	**84**
Foreign exchange contracts		**6,268**	**(4,918)**	**1,350**	**(197)**	**1,153**	**100**
Credit contracts – protection sold		**80**	**(75)**	**5**	**(3)**	**2**	**99**
Credit contracts – protection purchased		**17**	**(6)**	**11**	**—**	**11**	**98**
Total derivative liabilities	**$**	**38,116**	**(29,717)**	**8,399**	**(1,262)**	**7,137**	
December 31, 2018							
Derivative assets							
Interest rate contracts	$	18,435	(12,029)	6,406	(80)	6,326	90%
Commodity contracts		1,588	(849)	739	(4)	735	57
Equity contracts		7,545	(5,318)	2,227	(755)	1,472	78
Foreign exchange contracts		6,714	(5,355)	1,359	(35)	1,324	100
Credit contracts – protection sold		76	(73)	3	—	3	12
Credit contracts – protection purchased		202	(166)	36	(1)	35	78
Total derivative assets	$	34,560	(23,790)	10,770	(875)	9,895	
Derivative liabilities							
Interest rate contracts	$	16,308	(13,152)	3,156	(567)	2,589	92%
Commodity contracts		2,336	(727)	1,609	(8)	1,601	85
Equity contracts		6,010	(3,877)	2,133	(110)	2,023	75
Foreign exchange contracts		7,113	(5,522)	1,591	(188)	1,403	100
Credit contracts – protection sold		182	(180)	2	(2)	—	67
Credit contracts – protection purchased		98	(90)	8	—	8	11
Total derivative liabilities	$	32,047	(23,548)	8,499	(875)	7,624	

(1) Represents amounts with counterparties subject to enforceable master netting arrangements that have been offset in the consolidated balance sheet, including related cash collateral and portfolio level counterparty valuation adjustments. Counterparty valuation adjustments were $301 million and $353 million related to derivative assets and $92 million and $152 million related to derivative liabilities at June 30, 2019, and December 31, 2018, respectively. Cash collateral totaled $3.6 billion and $6.6 billion, netted against derivative assets and liabilities, respectively, at June 30, 2019, and $3.7 billion and $3.6 billion, respectively, at December 31, 2018.
(2) Represents the fair value of non-cash collateral pledged and received against derivative assets and liabilities with the same counterparty that are subject to enforceable master netting arrangements. U.S. GAAP does not permit netting of such non-cash collateral balances in the consolidated balance sheet but requires disclosure of these amounts.
(3) Over-the-counter percentages are calculated based on gross amounts recognized as of the respective balance sheet date.

Fair Value and Cash Flow Hedges

For fair value hedges, we use interest rate swaps to convert certain of our fixed-rate long-term debt and time certificates of deposit to floating rates to hedge our exposure to interest rate risk. We also enter into cross-currency swaps, cross-currency interest rate swaps and forward contracts to hedge our exposure to foreign currency risk and interest rate risk associated with the issuance of non-U.S. dollar denominated long-term debt. In addition, we use interest rate swaps, cross-currency swaps, cross-currency interest rate swaps and forward contracts to hedge against changes in fair value of certain investments in available-for-sale debt securities due to changes in interest rates, foreign currency rates, or both. We also use interest rate swaps to hedge against changes in fair value for certain mortgage loans held for sale.

For cash flow hedges, we use interest rate swaps to hedge the variability in interest payments received on certain floating-rate commercial loans and paid on certain floating-rate debt due to changes in the contractually specified interest rate.

We estimate $247 million pre-tax of deferred net losses related to cash flow hedges in OCI at June 30, 2019, will be reclassified into net interest income during the next twelve months. The deferred losses expected to be reclassified into net interest income are predominantly related to discontinued hedges of floating rate loans. For cash flow hedges as of June 30, 2019, we are hedging the variability of future cash flows for a maximum of 7 years. For more information on our accounting hedges, see Note 1 (Summary of Significant Accounting Policies) and Note 16 (Derivatives) in our 2018 Form 10-K.

Table 15.3 shows the net gains (losses) related to derivatives in fair value and cash flow hedging relationships.

Table 15.3: Gains (Losses) Recognized in Consolidated Statement of Income on Fair Value and Cash Flow Hedging Relationships

		Net interest income				Noninterest income	
(in millions)		Debt securities	Loans	Mortgage loans held for sale	Deposits	Long-term debt	Other	Total
Quarter ended June 30, 2019								
Total amounts presented in the consolidated statement of income	$	3,781	11,316	195	(2,213)	(1,900)	744	11,923
Gains (losses) on fair value hedging relationships								
Interest contracts								
Amounts related to interest settlements on derivatives (1)		14	—	—	(7)	7	—	14
Recognized on derivatives		(1,089)	—	(25)	351	2,947	—	2,184
Recognized on hedged items		1,096	—	24	(343)	(2,890)	—	(2,113)
Foreign exchange contracts								
Amounts related to interest settlements on derivatives (1)(2)		10	—	—	—	(128)	—	(118)
Recognized on derivatives (3)		(5)	—	—	—	205	326	526
Recognized on hedged items		4	—	—	—	(186)	(315)	(497)
Net income (expense) recognized on fair value hedges		30	—	(1)	1	(45)	11	(4)
Gains (losses) on cash flow hedging relationships								
Interest contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	(77)	—	—	1	—	(76)
Foreign exchange contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)	$	—	—	—	—	(3)	—	(3)
Net income (expense) recognized on cash flow hedges	$	—	(77)	—	—	(2)	—	(79)
Six months ended June 30, 2019								
Total amounts presented in the consolidated statement of income	$	7,722	22,670	347	(4,239)	(3,827)	1,318	23,991
Gains (losses) on fair value hedging relationships:								
Interest contracts								
Amounts related to interest settlements on derivatives (1)		30	—	—	(30)	—	—	—
Recognized on derivatives		(1,903)	—	(33)	558	4,933	—	3,555
Recognized on hedged items		1,913	—	31	(533)	(4,837)	—	(3,426)
Foreign exchange contracts								
Amounts related to interest settlements on derivatives (1)(2)		20	—	—	—	(270)	—	(250)
Recognized on derivatives (3)		(9)	—	—	—	497	(76)	412
Recognized on hedged items		9	—	—	—	(452)	76	(367)
Net income (expense) recognized on fair value hedges		60	—	(2)	(5)	(129)	—	(76)
Gains (losses) on cash flow hedging relationships:								
Interest contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	(155)	—	—	1	—	(154)
Foreign exchange contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	—	—	—	(4)	—	(4)
Net income (expense) recognized on cash flow hedges	$	—	(155)	—	—	(3)	—	(158)

(continued on following page)

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(in millions)		Net interest income: Debt securities	Net interest income: Loans	Net interest income: Mortgage loans held for sale	Net interest income: Deposits	Net interest income: Long-term debt	Noninterest income: Other	Total
Quarter ended June 30, 2018								
Total amounts presented in the consolidated statement of income	$	3,594	10,912	198	(1,268)	(1,658)	485	12,263
Gains (losses) on fair value hedging relationships:								
Interest contracts								
Amounts related to interest settlements on derivatives (1)		(42)	—	(1)	(20)	81	—	18
Recognized on derivatives		356	—	5	(41)	(819)	—	(499)
Recognized on hedged items		(352)	—	(7)	31	780	—	452
Foreign exchange contracts								
Amounts related to interest settlements on derivatives (1)(2)		10	—	—	—	(102)	—	(92)
Recognized on derivatives (3)		2	—	—	—	97	(1,410)	(1,311)
Recognized on hedged items		1	—	—	—	(82)	1,308	1,227
Net income (expense) recognized on fair value hedges		(25)	—	(3)	(30)	(45)	(102)	(205)
Gains (losses) on cash flow hedging relationships:								
Interest contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	(77)	—	—	—	—	(77)
Foreign exchange contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	—	—	—	—	—	—
Net income (expense) recognized on cash flow hedges	$	—	(77)	—	—	—	—	(77)
Six months ended June 30, 2018								
Total amounts presented in the consolidated statement of income	$	7,008	21,491	377	(2,358)	(3,234)	1,087	24,371
Gains (losses) on fair value hedging relationships:								
Interest contracts								
Amounts related to interest settlements on derivatives (1)		(124)	—	(2)	(25)	252	—	101
Recognized on derivatives		1,306	1	11	(190)	(3,212)	—	(2,084)
Recognized on hedged items		(1,320)	(1)	(15)	172	3,114	—	1,950
Foreign exchange contracts								
Amounts related to interest settlements on derivatives (1)(2)		15	—	—	—	(182)	—	(167)
Recognized on derivatives (3)		6	—	—	—	(74)	(750)	(818)
Recognized on hedged items		(2)	—	—	—	27	681	706
Net income (expense) recognized on fair value hedges		(119)	—	(6)	(43)	(75)	(69)	(312)
Gains (losses) on cash flow hedging relationships:								
Interest contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	(137)	—	—	—	—	(137)
Foreign exchange contracts								
Realized gains (losses) (pre-tax) reclassified from cumulative OCI into net income (4)		—	—	—	—	—	—	—
Net income (expense) recognized on cash flow hedges	$	—	(137)	—	—	—	—	(137)

(1) Includes changes in fair value due to the passage of time associated with the non-zero fair value amount at hedge inception.
(2) The second quarter and first half of 2019 included $7 million and $14 million, respectively, and the second quarter and first half of 2018 both included $2 million of the time value component recognized as net interest income (expense) on forward derivatives hedging foreign currency debt securities and long-term debt that were excluded from the assessment of hedge effectiveness.
(3) For certain fair value hedges of foreign currency risk, changes in fair value of cross-currency swaps attributable to changes in cross-currency basis spreads are excluded from the assessment of hedge effectiveness and recorded in other comprehensive income. See Note 21 (Other Comprehensive Income) for the amounts recognized in other comprehensive income.
(4) See Note 21 (Other Comprehensive Income) for details of amounts reclassified to net income.

Table 15.4 shows the carrying amount and associated cumulative basis adjustment related to the application of hedge accounting that is included in the carrying amount of hedged assets and liabilities in fair value hedging relationships.

Table 15.4: Hedged Items in Fair Value Hedging Relationship

		Hedged Items Currently Designated		Hedged Items No Longer Designated (1)	
(in millions)		Carrying Amount of Assets/ (Liabilities) (2)(4)	Hedge Accounting Basis Adjustment Assets/(Liabilities) (3)	Carrying Amount of Assets/(Liabilities) (4)	Hedge Accounting Basis Adjustment Assets/(Liabilities)
June 30, 2019					
Available-for-sale debt securities (5)	**$**	**39,478**	**1,226**	**5,704**	**110**
Mortgage loans held for sale		**852**	**16**	**388**	**4**
Deposits		**(56,584)**	**(425)**	**—**	**—**
Long-term debt		**(115,922)**	**(5,999)**	**(25,638)**	**270**
December 31, 2018					
Available-for-sale debt securities (5)		37,857	(157)	4,938	238
Mortgage loans held for sale		448	7	—	—
Deposits		(56,535)	115	—	—
Long-term debt		(104,341)	(742)	(25,539)	366

(1) Represents hedged items no longer designated in qualifying fair value hedging relationships for which an associated basis adjustment exists at the balance sheet date.
(2) Does not include the carrying amount of hedged items where only foreign currency risk is the designated hedged risk. The carrying amount excluded $1.5 billion for debt securities and $(5.7) billion for long-term debt as of June 30, 2019, and $1.6 billion for debt securities and $(6.3) billion for long-term debt as of December 31, 2018.
(3) The balance includes $828 million and $99 million of debt securities and long-term debt cumulative basis adjustments, respectively, as of June 30, 2019, and $1.4 billion and $66 million of debt securities and long-term debt cumulative basis adjustments,respectively, as of December 31, 2018, on terminated hedges whereby the hedged items have subsequently been re-designated into existing hedges.
(4) Represents the full carrying amount of the hedged asset or liability item as of the balance sheet date, except for circumstances in which only a portion of the asset or liability was designated as the hedged item in which case only the portion designated is presented.
(5) Carrying amount represents the amortized cost.

Derivatives Not Designated as Hedging Instruments

We use economic hedge derivatives to hedge the risk of changes in the fair value of certain residential MLHFS, residential MSRs measured at fair value, derivative loan commitments and other interests held. We also use economic hedge derivatives to mitigate the periodic earnings volatility caused by mismatches between the changes in fair value of the hedged item and hedging instrument recognized on our fair value accounting hedges. The resulting gain or loss on these economic hedge derivatives is reflected in mortgage banking noninterest income, net gains (losses) from equity investments and other noninterest income.

The derivatives used to hedge MSRs measured at fair value, resulted in net derivative gains (losses) of $1.2 billion and $2.1 billion in the second quarter and first half of 2019, respectively, and $(319) million and $(1.5) billion in the second quarter and first half of 2018, respectively, which are included in mortgage banking noninterest income. The aggregate fair value of these derivatives was a net asset of $602 million at June 30, 2019, and net asset of $757 million at December 31, 2018. The change in fair value of these derivatives for each period end is due to changes in the underlying market indices and interest rates as well as the purchase and sale of derivative financial instruments throughout the period as part of our dynamic MSR risk management process.

Loan commitments for mortgage loans that we intend to sell are considered derivatives. The aggregate fair value of derivative loan commitments on the balance sheet was a net positive fair value of $94 million at June 30, 2019 and a net positive fair value of $60 million at December 31, 2018, and is included in the caption “Interest rate contracts” under “Customer accommodation trading and other derivatives” in Table 15.1 in this Note.

For more information on economic hedges and other derivatives, see Note 16 (Derivatives) to Financial Statements in our 2018 Form 10-K. Table 15.5 shows the net gains (losses) recognized by income statement lines, related to derivatives not designated as hedging instruments.

Table 15.5: Gains (Losses) on Derivatives Not Designated as Hedging Instruments

	Noninterest income				
(in millions)	Mortgage banking	Net gains (losses) from equity securities	Net gains (losses) from trading activities	Other	Total
Quarter ended June 30, 2019					
Net gains (losses) recognized on economic hedges derivatives:					
Interest contracts (1)	$ 872	—	—	2	874
Equity contracts	—	(658)	—	(7)	(665)
Foreign exchange contracts	—	—	—	164	164
Credit contracts	—	—	—	(5)	(5)
Subtotal (2)	872	(658)	—	154	368
Net gains (losses) recognized on customer accommodation trading and other derivatives:					
Interest contracts (3)	179	—	(222)	—	(43)
Commodity contracts	—	—	27	—	27
Equity contracts	—	—	(1,110)	(133)	(1,243)
Foreign exchange contracts	—	—	(83)	—	(83)
Credit contracts	—	—	(16)	—	(16)
Subtotal	179	—	(1,404)	(133)	(1,358)
Net gains (losses) recognized related to derivatives not designated as hedging instruments	$ 1,051	(658)	(1,404)	21	(990)
Six months ended June 30, 2019					
Net gains (losses) recognized on economic hedges derivatives:					
Interest contracts (1)	$ 1,683	—	—	7	1,690
Equity contracts	—	(1,543)	—	—	(1,543)
Foreign exchange contracts	—	—	—	140	140
Credit contracts	—	—	—	10	10
Subtotal (2)	1,683	(1,543)	—	157	297
Net gains (losses) recognized on customer accommodation trading and other derivatives:					
Interest contracts (3)	297	—	(506)	—	(209)
Commodity contracts	—	—	78	—	78
Equity contracts	—	—	(3,259)	(406)	(3,665)
Foreign exchange contracts	—	—	(69)	—	(69)
Credit contracts	—	—	(60)	—	(60)
Subtotal	297	—	(3,816)	(406)	(3,925)
Net gains (losses) recognized related to derivatives not designated as hedging instruments	$ 1,980	(1,543)	(3,816)	(249)	(3,628)

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(in millions)		Mortgage banking	Net gains (losses) from equity securities	Net gains (losses) from trading activities	Other	Total
						Noninterest income
Quarter ended June 30, 2018						
Net gains (losses) recognized on economic hedges derivatives:						
Interest contracts (1)	$	(185)	—	—	(3)	(188)
Equity contracts		—	(540)	—	5	(535)
Foreign exchange contracts		—	—	—	486	486
Credit contracts		—	—	—	(10)	(10)
Subtotal (2)		(185)	(540)	—	478	(247)
Net gains (losses) recognized on customer accommodation trading and other derivatives:						
Interest contracts (3)		(46)	—	182	—	136
Commodity contracts		—	—	35	—	35
Equity contracts		—	—	655	(71)	584
Foreign exchange contracts		—	—	91	—	91
Credit contracts		—	—	(4)	—	(4)
Subtotal		(46)	—	959	(71)	842
Net gains (losses) recognized related to derivatives not designated as hedging instruments	$	(231)	(540)	959	407	595
Six months ended June 30, 2018						
Net gains (losses) recognized on economic hedges derivatives:						
Interest contracts (1)	$	(780)	—	—	6	(774)
Equity contracts		—	(598)	—	5	(593)
Foreign exchange contracts		—	—	—	327	327
Credit contracts		—	—	—	(6)	(6)
Subtotal (2)		(780)	(598)	—	332	(1,046)
Net gains (losses) recognized on customer accommodation trading and other derivatives:						
Interest contracts (3)		(305)	—	567	—	262
Commodity contracts		—	—	74	—	74
Equity contracts		—	—	1,114	(266)	848
Foreign exchange contracts		—	—	401	—	401
Credit contracts		—	—	6	—	6
Subtotal		(305)	—	2,162	(266)	1,591
Net gains (losses) recognized related to derivatives not designated as hedging instruments	$	(1,085)	(598)	2,162	66	545

(1) Mortgage banking amounts for the second quarter and first half of 2019 are comprised of gains (losses) of $1.2 billion and $2.1 billion, respectively, related to derivatives used as economic hedges of MSRs measured at fair value offset by gains (losses) of $(283) million and $(434) million related to derivatives used as economic hedges of mortgage loans held for sale and derivative loan commitments. The corresponding amounts for the second quarter and first half of 2018 are comprised of gains (losses) of $(319) million and $(1.5) billion offset by gains (losses) of $134 million and $759 million, respectively.

(2) Includes hedging gains (losses) of $(18) million and $(36) million for the second quarter and first half of 2019, respectively, and $8 million and $36 million for the second quarter and first half of 2018, respectively, which partially offset hedge accounting ineffectiveness.

(3) Amounts presented in mortgage banking noninterest income are gains (losses) on derivative loan commitments.

Credit Derivatives

Credit derivative contracts are arrangements whose value is derived from the transfer of credit risk of a reference asset or entity from one party (the purchaser of credit protection) to another party (the seller of credit protection). We use credit derivatives to assist customers with their risk management objectives. We may also use credit derivatives in structured product transactions or liquidity agreements written to special purpose vehicles. The maximum exposure of sold credit derivatives is managed through posted collateral, purchased credit derivatives and similar products in order to achieve our desired credit risk profile. This credit risk management provides an ability to recover a significant portion of any amounts that would be paid under the sold credit derivatives. We would be required to perform under sold credit derivatives in the event of default by the referenced obligors. Events of default include events such as bankruptcy, capital restructuring or lack of principal and/or interest payment. In certain cases, other triggers may exist, such as the credit downgrade of the referenced obligors or the inability of the special purpose vehicle for which we have provided liquidity to obtain funding.

Table 15.6 provides details of sold and purchased credit derivatives.

Table 15.6: Sold and Purchased Credit Derivatives

					Notional amount			
(in millions)		Fair value liability	Protection sold (A)	Protection sold – non-investment grade	Protection purchased with identical underlyings (B)	Net protection sold (A) - (B)	Other protection purchased	Range of maturities
June 30, 2019								
Credit default swaps on:								
Corporate bonds	**$**	**1**	**1,995**	**472**	**1,362**	**633**	**2,021**	**2019 - 2029**
Structured products		**31**	**138**	**133**	**109**	**29**	**113**	**2022 - 2047**
Credit protection on:								
Default swap index		**—**	**1,897**	**194**	**163**	**1,734**	**3,923**	**2019 - 2029**
Commercial mortgage-backed securities index		**38**	**342**	**87**	**316**	**26**	**51**	**2047 - 2058**
Asset-backed securities index		**8**	**41**	**41**	**41**	**—**	**1**	**2045 - 2046**
Other		**2**	**6,094**	**5,796**	**—**	**6,094**	**12,904**	**2019 - 2048**
Total credit derivatives	**$**	**80**	**10,507**	**6,723**	**1,991**	**8,516**	**19,013**	
December 31, 2018								
Credit default swaps on:								
Corporate bonds	$	59	2,037	441	1,374	663	1,460	2019 - 2027
Structured products		62	133	128	121	12	113	2022 - 2047
Credit protection on:								
Default swap index		1	3,618	582	1,998	1,620	2,896	2019 - 2028
Commercial mortgage-backed securities index		49	389	109	363	26	51	2047 - 2058
Asset-backed securities index		9	42	42	42	—	1	2045 - 2046
Other		2	5,522	5,327	—	5,522	12,561	2018 - 2048
Total credit derivatives	$	182	11,741	6,629	3,898	7,843	17,082	

Protection sold represents the estimated maximum exposure to loss that would be incurred under an assumed hypothetical circumstance, where the value of our interests and any associated collateral declines to zero, without any consideration of recovery or offset from any economic hedges. We believe this hypothetical circumstance to be a remote possibility and accordingly, this required disclosure is not an indication of expected loss. The amounts under non-investment grade represent the notional amounts of those credit derivatives on which we have a higher risk of being required to perform under the terms of the credit derivative and are a function of the underlying assets.

We consider the risk of performance to be high if the underlying assets under the credit derivative have an external rating that is below investment grade or an internal credit default grade that is equivalent thereto. We believe the net protection sold, which is representative of the net notional amount of protection sold and purchased with identical underlyings, in combination with other protection purchased, is more representative of our exposure to loss than either non-investment grade or protection sold. Other protection purchased represents additional protection, which may offset the exposure to loss for protection sold, that was not purchased with an identical underlying of the protection sold.

Credit-Risk Contingent Features

Certain of our derivative contracts contain provisions whereby if the credit rating of our debt were to be downgraded by certain major credit rating agencies, the counterparty could demand additional collateral or require termination or replacement of derivative instruments in a net liability position. The aggregate fair value of all derivative instruments with such credit-risk-related contingent features that are in a net liability position was $10.7 billion at June 30, 2019, and $7.4 billion at December 31, 2018, for which we posted $9.2 billion and $5.6 billion, respectively, in collateral in the normal course of business. A credit rating below investment grade is the credit-risk-related contingent feature that if triggered requires the maximum amount of collateral to be posted. If the credit rating of our debt had been downgraded below investment grade, on June 30, 2019, or December 31, 2018, we would have been required to post additional collateral of $1.5 billion or $1.8 billion, respectively, or potentially settle the contract in an amount equal to its fair value. Some contracts require that we provide more collateral than the fair value of derivatives that are in a net liability position if a downgrade occurs.

Counterparty Credit Risk

By using derivatives, we are exposed to counterparty credit risk if counterparties to the derivative contracts do not perform as expected. If a counterparty fails to perform, our counterparty credit risk is equal to the amount reported as a derivative asset on our balance sheet. The amounts reported as a derivative asset are derivative contracts in a gain position, and to the extent subject to legally enforceable master netting arrangements, net of derivatives in a loss position with the same counterparty and cash collateral received. We minimize counterparty credit risk through credit approvals, limits, monitoring procedures, executing master netting arrangements and obtaining collateral, where appropriate. To the extent the master netting arrangements and other criteria meet the applicable requirements, including determining the legal enforceability of the arrangement, it is our policy to present derivative balances and related cash collateral amounts net on the balance sheet. We incorporate credit valuation adjustments (CVA) to reflect counterparty credit risk in determining the fair value of our derivatives. Such adjustments, which consider the effects of enforceable master netting agreements and collateral arrangements, reflect market-based views of the credit quality of each counterparty. Our CVA calculation is determined based on observed credit spreads in the credit default swap market and indices indicative of the credit quality of the counterparties to our derivatives.

Note 16: Fair Values of Assets and Liabilities

We use fair value measurements to record fair value adjustments to certain assets and liabilities and to determine fair value disclosures. Assets and liabilities recorded at fair value on a recurring basis are presented in Table 16.2 in this Note. From time to time, we may be required to record fair value adjustments on a nonrecurring basis. These nonrecurring fair value adjustments typically involve application of LOCOM accounting, measurement alternative accounting for nonmarketable equity securities or write-downs of individual assets. Assets recorded on a nonrecurring basis are presented in Table 16.13 in this Note.

See Note 1 (Summary of Significant Accounting Policies) in our 2018 Form 10-K for discussion of how we determine fair value. For descriptions of the valuation methodologies we use for assets and liabilities recorded at fair value on a recurring or nonrecurring basis and for estimating fair value for financial instruments that are not recorded at fair value, see Note 18 (Fair Values of Assets and Liabilities) in our 2018 Form 10-K.

FAIR VALUE HIERARCHY We group our assets and liabilities measured at fair value in three levels based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. These levels are:

- Level 1 – Valuation is based upon quoted prices for identical instruments traded in active markets.
- Level 2 – Valuation is based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.
- Level 3 – Valuation is generated from techniques that use significant assumptions that are not observable in the market. These unobservable assumptions reflect estimates of assumptions that market participants would use in pricing the asset or liability. Valuation techniques include use of option pricing models, discounted cash flow models and similar techniques.

We do not classify an equity security in the fair value hierarchy if we use the non-published net asset value (NAV) per share (or its equivalent) that has been communicated to us as an investor as a practical expedient to measure fair value. We use NAV per share as the fair value measurement for certain nonmarketable equity fund investments. Marketable equity securities with published NAVs continue to be classified in the fair value hierarchy.

Fair Value Measurements from Vendors

For certain assets and liabilities, we obtain fair value measurements from vendors, which predominantly consist of third-party pricing services, and record the unadjusted fair value in our financial statements. For additional information, see Note 18 (Fair Values of Assets and Liabilities) in our 2018 Form 10-K. Table 16.1 presents unadjusted fair value measurements provided by brokers or third-party pricing services by fair value hierarchy level. Fair value measurements obtained from brokers or third-party pricing services that we have adjusted to determine the fair value recorded in our financial statements are excluded from Table 16.1.

Table 16.1: Fair Value Measurements by Brokers or Third-Party Pricing Services

		Brokers			Third-party pricing services	
(in millions)	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
June 30, 2019						
Trading debt securities	**$ —**	**—**	**—**	**534**	**319**	**—**
Available-for-sale debt securities:						
Securities of U.S. Treasury and federal agencies	**—**	**—**	**—**	**12,324**	**2,995**	**—**
Securities of U.S. states and political subdivisions	**—**	**—**	**—**	**—**	**44,642**	**38**
Mortgage-backed securities	**—**	**—**	**—**	**—**	**161,260**	**41**
Other debt securities (1)	**—**	**45**	**130**	**—**	**41,947**	**663**
Total available-for-sale debt securities	**—**	**45**	**130**	**12,324**	**250,844**	**742**
Equity securities:						
Marketable	**—**	**—**	**—**	**—**	**160**	**—**
Nonmarketable	**—**	**—**	**—**	**—**	**—**	**—**
Total equity securities	**—**	**—**	**—**	**—**	**160**	**—**
Derivative assets	**—**	**—**	**—**	**12**	**—**	**—**
Derivative liabilities	**—**	**—**	**—**	**(13)**	**(2)**	**—**
Other liabilities (2)	**—**	**—**	**—**	**—**	**—**	**—**
December 31, 2018						
Trading debt securities	$ —	—	—	899	256	—
Available-for-sale debt securities:						
Securities of U.S. Treasury and federal agencies	—	—	—	10,399	2,949	—
Securities of U.S. states and political subdivisions	—	—	—	—	48,377	43
Mortgage-backed securities	—	—	—	—	160,162	41
Other debt securities (1)	—	45	129	—	44,292	758
Total available-for-sale debt securities	—	45	129	10,399	255,780	842
Equity securities:						
Marketable	—	—	—	—	158	—
Nonmarketable	—	—	—	—	1	—
Total equity securities	—	—	—	—	159	—
Derivative assets	—	—	—	17	—	—
Derivative liabilities	—	—	—	(12)	—	—
Other liabilities (2)	—	—	—	—	—	—

(1) Includes corporate debt securities, collateralized loan and other debt obligations, asset-backed securities, and other debt securities.
(2) Includes short sale liabilities and other liabilities.

Assets and Liabilities Recorded at Fair Value on a Recurring Basis

Table 16.2 presents the balances of assets and liabilities recorded at fair value on a recurring basis.

Table 16.2: Fair Value on a Recurring Basis

(in millions)		Level 1	Level 2	Level 3	Netting (1)	Total
June 30, 2019						
Trading debt securities:						
Securities of U.S. Treasury and federal agencies	$	15,010	3,215	—	—	18,225
Securities of U.S. states and political subdivisions		—	3,314	—	—	3,314
Collateralized loan obligations		—	758	249	—	1,007
Corporate debt securities		—	11,321	44	—	11,365
Mortgage-backed securities		—	35,186	—	—	35,186
Asset-backed securities		—	1,084	—	—	1,084
Other trading debt securities		—	13	14	—	27
Total trading debt securities		15,010	54,891	307	—	70,208
Available-for-sale debt securities:						
Securities of U.S. Treasury and federal agencies		12,324	2,995	—	—	15,319
Securities of U.S. states and political subdivisions		—	44,704	391	—	45,095
Mortgage-backed securities:						
Federal agencies		—	155,858	—	—	155,858
Residential		—	1,263	—	—	1,263
Commercial		—	4,139	41	—	4,180
Total mortgage-backed securities		—	161,260	41	—	161,301
Corporate debt securities		37	5,810	383	—	6,230
Collateralized loan and other debt obligations (2)		—	32,346	649	—	32,995
Asset-backed securities:						
Automobile loans and leases		—	889	—	—	889
Home equity loans		—	14	—	—	14
Other asset-backed securities		—	3,792	341	—	4,133
Total asset-backed securities		—	4,695	341	—	5,036
Other debt securities		—	7	—	—	7
Total available-for-sale debt securities		12,361	251,817	1,805 (3)	—	265,983
Mortgage loans held for sale		—	15,228	1,115	—	16,343
Loans held for sale		—	1,106	12	—	1,118
Loans		—	—	202	—	202
Mortgage servicing rights (residential)		—	—	12,096	—	12,096
Derivative assets:						
Interest rate contracts		45	25,258	250	—	25,553
Commodity contracts		—	1,404	20	—	1,424
Equity contracts		2,162	3,300	1,915	—	7,377
Foreign exchange contracts		12	5,522	21	—	5,555
Credit contracts		—	62	79	—	141
Netting		—	—	—	(26,888)	(26,888)
Total derivative assets		2,219	35,546	2,285	(26,888)	13,162
Equity securities - excluding securities at NAV:						
Marketable		28,447	259	—	—	28,706
Nonmarketable		—	16	7,110	—	7,126
Total equity securities		28,447	275	7,110	—	35,832
Total assets included in the fair value hierarchy	$	58,037	358,863	24,932	(26,888)	414,944
Equity securities at NAV (4)						118
Total assets recorded at fair value						415,062
Derivative liabilities:						
Interest rate contracts	$	(55)	(20,537)	(45)	—	(20,637)
Commodity contracts		—	(1,887)	(49)	—	(1,936)
Equity contracts		(1,509)	(5,526)	(2,143)	—	(9,178)
Foreign exchange contracts		(13)	(6,224)	(31)	—	(6,268)
Credit contracts		—	(63)	(34)	—	(97)
Netting		—	—	—	29,717	29,717
Total derivative liabilities		(1,577)	(34,237)	(2,302)	29,717	(8,399)
Short sale liabilities:						
Securities of U.S. Treasury and federal agencies		(7,768)	(230)	—	—	(7,998)
Mortgage-backed securities		—	(533)	—	—	(533)
Asset-backed securities		—	(10)	—	—	(10)
Corporate debt securities		—	(4,887)	—	—	(4,887)
Equity securities		(2,527)	—	—	—	(2,527)
Other securities		—	—	—	—	—
Total short sale liabilities		(10,295)	(5,660)	—	—	(15,955)
Other liabilities		—	—	(2)	—	(2)
Total liabilities recorded at fair value	$	(11,872)	(39,897)	(2,304)	29,717	(24,356)

(1) Represents balance sheet netting of derivative asset and liability balances and related cash collateral. See Note 15 (Derivatives) for additional information.
(2) Includes collateralized debt obligations of $649 million.
(3) A significant portion of the balance consists of securities that are investment grade based on ratings received from the ratings agencies or internal credit grades categorized as investment grade if external ratings are not available. The securities are classified as Level 3 due to limited market activity.
(4) Consists of certain nonmarketable equity securities that are measured at fair value using NAV per share (or its equivalent) as a practical expedient and are excluded from the fair value hierarchy.

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(in millions)		Level 1	Level 2	Level 3	Netting (1)	Total
December 31, 2018						
Trading debt securities:						
Securities of U.S. Treasury and federal agencies	$	20,525	2,892	—	—	23,417
Securities of U.S. states and political subdivisions		—	3,272	3	—	3,275
Collateralized loan obligations		—	673	237	—	910
Corporate debt securities		—	10,723	34	—	10,757
Mortgage-backed securities		—	30,715	—	—	30,715
Asset-backed securities		—	893	—	—	893
Other trading debt securities		—	6	16	—	22
Total trading debt securities		20,525	49,174	290	—	69,989
Available-for-sale debt securities:						
Securities of U.S. Treasury and federal agencies		10,399	2,949	—	—	13,348
Securities of U.S. states and political subdivisions		—	48,820	444	—	49,264
Mortgage-backed securities:						
Federal agencies		—	153,203	—	—	153,203
Residential		—	2,775	—	—	2,775
Commercial		—	4,184	41	—	4,225
Total mortgage-backed securities		—	160,162	41	—	160,203
Corporate debt securities		34	5,867	370	—	6,271
Collateralized loan and other debt obligations (2)		—	34,543	800	—	35,343
Asset-backed securities:						
Automobile loans and leases		—	925	—	—	925
Home equity loans		—	112	—	—	112
Other asset-backed securities		—	4,056	389	—	4,445
Total asset-backed securities		—	5,093	389	—	5,482
Other debt securities		—	1	—	—	1
Total available-for-sale debt securities		10,433	257,435	2,044 (3)	—	269,912
Mortgage loans held for sale		—	10,774	997	—	11,771
Loans held for sale		—	1,409	60	—	1,469
Loans		—	—	244	—	244
Mortgage servicing rights (residential)		—	—	14,649	—	14,649
Derivative assets:						
Interest rate contracts		46	18,294	95	—	18,435
Commodity contracts		—	1,535	53	—	1,588
Equity contracts		1,648	4,582	1,315	—	7,545
Foreign exchange contracts		17	6,689	8	—	6,714
Credit contracts		—	179	99	—	278
Netting		—	—	—	(23,790)	(23,790)
Total derivative assets		1,711	31,279	1,570	(23,790)	10,770
Equity securities - excluding securities at NAV:						
Marketable		23,205	757	—	—	23,962
Nonmarketable		—	24	5,468	—	5,492
Total equity securities		23,205	781	5,468	—	29,454
Total assets included in the fair value hierarchy	$	55,874	350,852	25,322	(23,790)	408,258
Equity securities at NAV (4)						102
Total assets recorded at fair value						408,360
Derivative liabilities:						
Interest rate contracts	$	(21)	(16,217)	(70)	—	(16,308)
Commodity contracts		—	(2,287)	(49)	—	(2,336)
Equity contracts		(1,492)	(3,186)	(1,332)	—	(6,010)
Foreign exchange contracts		(12)	(7,067)	(34)	—	(7,113)
Credit contracts		—	(216)	(64)	—	(280)
Netting		—	—	—	23,548	23,548
Total derivative liabilities		(1,525)	(28,973)	(1,549)	23,548	(8,499)
Short sale liabilities:						
Securities of U.S. Treasury and federal agencies		(11,850)	(411)	—	—	(12,261)
Mortgage-backed securities		—	(47)	—	—	(47)
Corporate debt securities		—	(4,505)	—	—	(4,505)
Equity securities		(2,902)	(2)	—	—	(2,904)
Other securities		—	(3)	—	—	(3)
Total short sale liabilities		(14,752)	(4,968)	—	—	(19,720)
Other liabilities		—	—	(2)	—	(2)
Total liabilities recorded at fair value	$	(16,277)	(33,941)	(1,551)	23,548	(28,221)

(1) Represents balance sheet netting of derivative asset and liability balances and related cash collateral. See Note 15 (Derivatives) for additional information.
(2) Includes collateralized debt obligations of $800 million.
(3) A significant portion of the balance consists of securities that are investment grade based on ratings received from the ratings agencies or internal credit grades categorized as investment grade if external ratings are not available. The securities are classified as Level 3 due to limited market activity.
(4) Consists of certain nonmarketable equity securities that are measured at fair value using NAV per share (or its equivalent) as a practical expedient and are excluded from the fair value hierarchy.

Changes in Fair Value Levels

We monitor the availability of observable market data to assess the appropriate classification of financial instruments within the fair value hierarchy and transfer between Level 1, Level 2, and Level 3 accordingly. Observable market data includes but is not limited to quoted prices and market transactions. Changes in economic conditions or market liquidity generally will drive changes in availability of observable market data. Changes in availability of observable market data, which also may result in changing the valuation technique used, are generally the cause of transfers between Level 1, Level 2, and Level 3. The amounts reported as transfers represent the fair value as of the beginning of the quarter in which the transfer occurred.

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the quarter ended June 30, 2019, are presented in Table 16.3.

Table 16.3: Changes in Level 3 Fair Value Assets and Liabilities on a Recurring Basis – Quarter ended June 30, 2019

		Total net gains (losses) included in							
(in millions)	Balance, beginning of period	Net income	Other compre-hensive income	Purchases, sales, issuances and settlements, net (1)	Transfers into Level 3 (2)	Transfers out of Level 3 (3)	Balance, end of period	Net unrealized gains (losses) included in income related to assets and liabilities held at period end (4)	
Quarter ended June 30, 2019									
Trading debt securities:									
Securities of U.S. states and political subdivisions	$ —	—	—	—	—	—	—	—	
Collateralized loan obligations	275	(2)	—	(24)	—	—	249	(6)	
Corporate debt securities	41	1	—	3	—	(1)	44	1	
Other trading debt securities	15	(1)	—	—	—	—	14	—	
Total trading debt securities	331	(2)	—	(21)	—	(1)	307	(5)	(5)
Available-for-sale debt securities:									
Securities of U.S. states and political subdivisions	470	1	2	(33)	—	(49)	391	—	
Mortgage-backed securities:									
Residential	—	—	—	—	—	—	—	—	
Commercial	41	—	—	—	—	—	41	—	
Total mortgage-backed securities	41	—	—	—	—	—	41	—	
Corporate debt securities	377	—	(1)	7	—	—	383	—	
Collateralized loan and other debt obligations	755	7	(6)	(107)	—	—	649	—	
Asset-backed securities:									
Other asset-backed securities	362	—	—	(21)	—	—	341	—	
Total asset-backed securities	362	—	—	(21)	—	—	341	—	
Total available-for-sale debt securities	2,005	8	(5)	(154)	—	(49)	1,805	—	(6)
Mortgage loans held for sale	998	37	—	(22)	104	(2)	1,115	39	(7)
Loans held for sale	71	—	—	(3)	—	(56)	12	—	
Loans	225	1	—	(24)	—	—	202	(2)	(7)
Mortgage servicing rights (residential)(8)	13,336	(1,639)	—	399	—	—	12,096	(1,078)	(7)
Net derivative assets and liabilities:									
Interest rate contracts	101	237	—	(133)	—	—	205	141	
Commodity contracts	(18)	(75)	—	64	—	—	(29)	(10)	
Equity contracts	(162)	15	—	(66)	(2)	(13)	(228)	(29)	
Foreign exchange contracts	(16)	3	—	3	—	—	(10)	7	
Credit contracts	49	(3)	—	(1)	—	—	45	(3)	
Total derivative contracts	(46)	177	—	(133)	(2)	(13)	(17)	106	(9)
Equity securities:									
Nonmarketable	6,381	724	—	—	5	—	7,110	724	
Total equity securities	6,381	724	—	—	5	—	7,110	724	(10)
Other liabilities	(2)	—	—	—	—	—	(2)	—	(7)

(1) See Table 16.4 for detail.
(2) All assets and liabilities transferred into level 3 were previously classified within level 2.
(3) All assets and liabilities transferred out of level 3 are classified as level 2.
(4) Represents only net gains (losses) that are due to changes in economic conditions and management's estimates of fair value and excludes changes due to the collection/realization of cash flows over time.
(5) Included in net gains (losses) from trading activities in the income statement.
(6) Included in net gains (losses) on debt securities in the income statement.
(7) Included in mortgage banking and other noninterest income in the income statement.
(8) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).
(9) Included in mortgage banking, trading activities, equity securities and other noninterest income in the income statement.
(10) Included in net gains (losses) from equity securities in the income statement.

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Table 16.4 presents gross purchases, sales, issuances and settlements related to the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the quarter ended June 30, 2019.

Table 16.4: Gross Purchases, Sales, Issuances and Settlements – Level 3 – Quarter ended June 30, 2019

(in millions)	Purchases	Sales	Issuances	Settlements	Net
Quarter ended June 30, 2019					
Trading debt securities:					
Securities of U.S. states and political subdivisions	$ —	—	—	—	—
Collateralized loan obligations	44	(65)	—	(3)	(24)
Corporate debt securities	6	(3)	—	—	3
Other trading debt securities	—	—	—	—	—
Total trading debt securities	50	(68)	—	(3)	(21)
Available-for-sale debt securities:					
Securities of U.S. states and political subdivisions	—	—	6	(39)	(33)
Mortgage-backed securities:					
Residential	—	—	—	—	—
Commercial	—	—	—	—	—
Total mortgage-backed securities	—	—	—	—	—
Corporate debt securities	8	—	—	(1)	7
Collateralized loan and other debt obligations	—	—	—	(107)	(107)
Asset-backed securities:					
Other asset-backed securities	—	(2)	57	(76)	(21)
Total asset-backed securities	—	(2)	57	(76)	(21)
Total available-for-sale debt securities	8	(2)	63	(223)	(154)
Mortgage loans held for sale	30	(47)	54	(59)	(22)
Loans held for sale	—	(1)	—	(2)	(3)
Loans	—	—	2	(26)	(24)
Mortgage servicing rights (residential) (1)	—	(1)	400	—	399
Net derivative assets and liabilities:					
Interest rate contracts	—	—	—	(133)	(133)
Commodity contracts	—	—	—	64	64
Equity contracts	—	—	—	(66)	(66)
Foreign exchange contracts	—	—	—	3	3
Credit contracts	2	(3)	—	—	(1)
Total derivative contracts	2	(3)	—	(132)	(133)
Equity securities:					
Nonmarketable	—	—	—	—	—
Total equity securities	—	—	—	—	—
Other liabilities	—	—	—	—	—

(1) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).

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Table 16.5 presents gross purchases, sales, issuances and settlements related to the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the quarter ended June 30, 2018.

Table 16.5: Changes in Level 3 Fair Value Assets and Liabilities on a Recurring Basis – Quarter ended June 30, 2018

		Total net gains (losses) included in							
(in millions)	Balance, beginning of period	Net income	Other compre-hensive income	Purchases, sales, issuances and settlements, net (1)	Transfers into Level 3 (2)	Transfers out of Level 3 (3)	Balance, end of period	Net unrealized gains (losses) included in income related to assets and liabilities held at period end	(4)
Quarter ended June 30, 2018									
Trading debt securities:									
Securities of U.S. states and political subdivisions	$ 3	—	—	—	—	—	3	—	
Collateralized loan obligations	316	(6)	—	(19)	—	—	291	(8)	
Corporate debt securities	34	—	—	3	—	(1)	36	1	
Other trading debt securities	18	(1)	—	—	—	—	17	—	
Total trading debt securities	371	(7)	—	(16)	—	(1)	347	(7)	(5)
Available-for-sale debt securities:									
Securities of U.S. states and political subdivisions	617	1	—	(49)	—	(10)	559	—	
Mortgage-backed securities:									
Residential	1	—	(1)	—	—	—	—	—	
Commercial	67	—	(1)	(13)	—	—	53	—	
Total mortgage-backed securities	68	—	(2)	(13)	—	—	53	—	
Corporate debt securities	410	1	1	31	—	—	443	—	
Collateralized loan and other debt obligations	1,045	6	10	(24)	—	—	1,037	—	
Asset-backed securities:									
Other asset-backed securities	501	—	(1)	(99)	—	—	401	—	
Total asset-backed securities	501	—	(1)	(99)	—	—	401	—	
Total available-for-sale debt securities	2,641	8	8	(154)	—	(10)	2,493	—	(6)
Mortgage loans held for sale	950	(11)	—	25	25	(3)	986	(11)	(7)
Loans held for sale	—	(1)	—	—	21	—	20	—	
Loans	352	—	—	(31)	—	—	321	(4)	(7)
Mortgage servicing rights (residential) (8)	15,041	(115)	—	485	—	—	15,411	345	(7)
Net derivative assets and liabilities:									
Interest rate contracts	(8)	(63)	—	30	—	—	(41)	6	
Commodity contracts	10	15	—	(2)	3	—	26	21	
Equity contracts	(322)	(12)	—	(7)	—	2	(339)	261	
Foreign exchange contracts	1	(18)	—	2	—	—	(15)	(13)	
Credit contracts	41	(12)	—	(5)	—	—	24	(17)	
Total derivative contracts	(278)	(90)	—	18	3	2	(345)	258	(9)
Equity securities:									
Nonmarketable	5,219	585	—	—	6	(4)	5,806	586	
Total equity securities	5,219	585	—	—	6	(4)	5,806	586	(10)
Other liabilities	(2)	—	—	—	—	—	(2)	—	(7)

(1) See Table 16.6 for detail.
(2) All assets and liabilities transferred into level 3 were previously classified within level 2.
(3) All assets and liabilities transferred out of level 3 are classified as level 2.
(4) Represents only net gains (losses) that are due to changes in economic conditions and management's estimates of fair value and excludes changes due to the collection/realization of cash flows over time.
(5) Included in net gains (losses) from trading activities in the income statement.
(6) Included in net gains (losses) on debt securities in the income statement.
(7) Included in mortgage banking and other noninterest income in the income statement.
(8) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).
(9) Included in mortgage banking, trading activities, equity securities and other noninterest income in the income statement.
(10) Included in net gains (losses) from equity securities in the income statement.

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Table 16.6 presents gross purchases, sales, issuances and settlements related to the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the quarter ended June 30, 2018.

Table 16.6: Gross Purchases, Sales, Issuances and Settlements – Level 3 – Quarter ended June 30, 2018

(in millions)	Purchases	Sales	Issuances	Settlements	Net
Quarter ended June 30, 2018					
Trading debt securities:					
Securities of U.S. states and political subdivisions	$ —	—	—	—	—
Collateralized loan obligations	89	(39)	—	(69)	(19)
Corporate debt securities	4	(1)	—	—	3
Other trading debt securities	—	—	—	—	—
Total trading debt securities	93	(40)	—	(69)	(16)
Available-for-sale debt securities:					
Securities of U.S. states and political subdivisions	—	—	—	(49)	(49)
Mortgage-backed securities:					
Residential	—	—	—	—	—
Commercial	—	—	—	(13)	(13)
Total mortgage-backed securities	—	—	—	(13)	(13)
Corporate debt securities	31	—	—	—	31
Collateralized loan and other debt obligations	—	—	—	(24)	(24)
Asset-backed securities:					
Other asset-backed securities	—	—	9	(108)	(99)
Total asset-backed securities	—	—	9	(108)	(99)
Total available-for-sale debt securities	31	—	9	(194)	(154)
Mortgage loans held for sale	20	(68)	109	(36)	25
Loans held for sale	—	—	—	—	—
Loans	—	—	4	(35)	(31)
Mortgage servicing rights (residential) (1)	—	(1)	486	—	485
Net derivative assets and liabilities:					
Interest rate contracts	—	—	—	30	30
Commodity contracts	—	—	—	(2)	(2)
Equity contracts	—	—	—	(7)	(7)
Foreign exchange contracts	—	—	—	2	2
Credit contracts	5	(2)	—	(8)	(5)
Total derivative contracts	5	(2)	—	15	18
Equity securities:					
Nonmarketable	—	—	—	—	—
Total equity securities	—	—	—	—	—
Other liabilities	—	—	—	—	—

(1) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the first half of 2019, are presented in Table 16.7.

Table 16.7: Changes in Level 3 Fair Value Assets and Liabilities on a Recurring Basis – Six months ended June 30, 2019

		Total net gains (losses) included in							
(in millions)	Balance, beginning of period	Net income	Other compre-hensive income	Purchases, sales, issuances and settlements, net (1)	Transfers into Level 3 (2)	Transfers out of Level 3 (3)	Balance, end of period	Net unrealized gains (losses) included in income related to assets and liabilities held at period end (4)	
Six months ended June 30, 2019									
Trading debt securities:									
Securities of U.S. states and political subdivisions	$ 3	—	—	(2)	—	(1)	—	—	
Collateralized loan obligations	237	(5)	—	17	—	—	249	(4)	
Corporate debt securities	34	3	—	7	1	(1)	44	3	
Other trading debt securities	16	(2)	—	—	—	—	14	—	
Total trading debt securities	290	(4)	—	22	1	(2)	307	(1)	(5)
Available-for-sale debt securities:									
Securities of U.S. states and political subdivisions	444	1	5	(10)	—	(49)	391	—	
Mortgage-backed securities:									
Residential	—	—	—	—	—	—	—	—	
Commercial	41	—	—	—	—	—	41	—	
Total mortgage-backed securities	41	—	—	—	—	—	41	—	
Corporate debt securities	370	1	3	9	—	—	383	—	
Collateralized loan and other debt obligations	800	13	(10)	(154)	—	—	649	—	
Asset-backed securities:									
Other asset-backed securities	389	—	(1)	(47)	—	—	341	—	
Total asset-backed securities	389	—	(1)	(47)	—	—	341	—	
Total available-for-sale debt securities	2,044	15	(3)	(202)	—	(49)	1,805	—	(6)
Mortgage loans held for sale	997	52	—	(88)	160	(6)	1,115	54	(7)
Loans held for sale	60	—	—	8	37	(93)	12	—	
Loans	244	1	—	(43)	—	—	202	(4)	(7)
Mortgage servicing rights (residential) (8)	14,649	(3,012)	—	459	—	—	12,096	(1,969)	(7)
Net derivative assets and liabilities:									
Interest rate contracts	25	424	—	(244)	—	—	205	220	
Commodity contracts	4	(126)	—	91	2	—	(29)	(26)	
Equity contracts	(17)	(104)	—	(69)	7	(45)	(228)	(175)	
Foreign exchange contracts	(26)	10	—	6	—	—	(10)	17	
Credit contracts	35	5	—	5	—	—	45	10	
Total derivative contracts	21	209	—	(211)	9	(45)	(17)	46	(9)
Equity securities:									
Nonmarketable	5,468	1,650	—	(1)	5	(12)	7,110	1,650	
Total equity securities	5,468	1,650	—	(1)	5	(12)	7,110	1,650	(10)
Other liabilities	(2)	—	—	—	—	—	(2)	—	(7)

(1) See Table 16.8 for detail.
(2) All assets and liabilities transferred into level 3 were previously classified within level 2.
(3) All assets and liabilities transferred out of level 3 are classified as level 2.
(4) Represents only net gains (losses) that are due to changes in economic conditions and management's estimates of fair value and excludes changes due to the collection/realization of cash flows over time.
(5) Included in net gains (losses) from trading activities in the income statement.
(6) Included in net gains (losses) on debt securities in the income statement.
(7) Included in mortgage banking and other noninterest income in the income statement.
(8) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).
(9) Included in mortgage banking, trading activities, equity securities and other noninterest income in the income statement.
(10) Included in net gains (losses) from equity securities in the income statement.

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Table 16.8 presents gross purchases, sales, issuances and settlements related to the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the first half of 2019.

Table 16.8: Gross Purchases, Sales, Issuances and Settlements – Level 3 – Six months ended June 30, 2019

(in millions)	Purchases	Sales	Issuances	Settlements	Net
Six months ended June 30, 2019					
Trading debt securities:					
Securities of U.S. states and political subdivisions	$ —	—	—	(2)	(2)
Collateralized loan obligations	174	(152)	—	(5)	17
Corporate debt securities	11	(4)	—	—	7
Other trading debt securities	—	—	—	—	—
Total trading debt securities	185	(156)	—	(7)	22
Available-for-sale debt securities:					
Securities of U.S. states and political subdivisions	—	—	55	(65)	(10)
Mortgage-backed securities:					
Residential	—	—	—	—	—
Commercial	—	—	—	—	—
Total mortgage-backed securities	—	—	—	—	—
Corporate debt securities	11	—	—	(2)	9
Collateralized loan and other debt obligations	—	—	—	(154)	(154)
Asset-backed securities:					
Other asset-backed securities	—	(5)	123	(165)	(47)
Total asset-backed securities	—	(5)	123	(165)	(47)
Total available-for-sale debt securities	11	(5)	178	(386)	(202)
Mortgage loans held for sale	46	(140)	100	(94)	(88)
Loans held for sale	12	(2)	—	(2)	8
Loans	2	—	5	(50)	(43)
Mortgage servicing rights (residential) (1)	—	(282)	741	—	459
Net derivative assets and liabilities:					
Interest rate contracts	—	—	—	(244)	(244)
Commodity contracts	—	—	—	91	91
Equity contracts	—	—	—	(69)	(69)
Foreign exchange contracts	—	—	—	6	6
Credit contracts	8	(3)	—	—	5
Total derivative contracts	8	(3)	—	(216)	(211)
Equity securities:					
Nonmarketable	—	(1)	—	—	(1)
Total equity securities	—	(1)	—	—	(1)
Other liabilities	—	—	—	—	—

(1) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the first half of 2018, are presented in Table 16.9.

Table 16.9: Changes in Level 3 Fair Value Assets and Liabilities on a Recurring Basis – Six months ended June 30, 2018

		Total net gains (losses) included in							
(in millions)	Balance, beginning of period	Net income	Other compre-hensive income	Purchases, sales, issuances and settlements, net (1)	Transfers into Level 3 (2)	Transfers out of Level 3 (3)	Balance, end of period	Net unrealized gains (losses) included in income related to assets and liabilities held at period end	(4)
Six months ended June 30, 2018									
Trading debt securities:									
Securities of U.S. states and political subdivisions	$ 3	—	—	—	—	—	3	—	
Collateralized loan obligations	354	(4)	—	(59)	—	—	291	—	
Corporate debt securities	31	—	—	6	—	(1)	36	—	
Other trading debt securities	19	(2)	—	—	—	—	17	—	
Total trading debt securities	407	(6)	—	(53)	—	(1)	347	—	(5)
Available-for-sale debt securities:									
Securities of U.S. states and political subdivisions	925	5	(2)	(90)	—	(279)	559	—	
Mortgage-backed securities:									
Residential	1	—	(1)	—	—	—	—	—	
Commercial	75	1	(2)	(21)	—	—	53	—	
Total mortgage-backed securities	76	1	(3)	(21)	—	—	53	—	
Corporate debt securities	407	2	4	30	—	—	443	—	
Collateralized loan and other debt obligations	1,020	11	53	(47)	—	—	1,037	—	
Asset-backed securities:									
Other asset-backed securities	566	8	(8)	(165)	—	—	401	—	
Total asset-backed securities	566	8	(8)	(165)	—	—	401	—	
Total available-for-sale debt securities	2,994	27	44	(293)	—	(279)	2,493	—	(6)
Mortgage loans held for sale	998	(34)	—	(12)	40	(6)	986	(32)	(7)
Loans held for sale	14	1	—	(16)	21	—	20	—	
Loans	376	(1)	—	(54)	—	—	321	(7)	(7)
Mortgage servicing rights (residential) (8)	13,625	732	—	1,054	—	—	15,411	1,675	(7)
Net derivative assets and liabilities:									
Interest rate contracts	71	(408)	—	296	—	—	(41)	(94)	
Commodity contracts	19	30	—	(26)	3	—	26	22	
Equity contracts	(511)	57	—	64	—	51	(339)	80	
Foreign exchange contracts	7	(25)	—	3	—	—	(15)	(17)	
Credit contracts	36	(4)	—	(8)	—	—	24	(8)	
Total derivative contracts	(378)	(350)	—	329	3	51	(345)	(17)	(9)
Equity securities:									
Nonmarketable	5,203	693	—	(96)	10	(4)	5,806	687	
Total equity securities	5,203	693	—	(96)	10	(4)	5,806	687	(10)
Other liabilities	(3)	1	—	—	—	—	(2)	—	(7)

(1) See Table 16.10 for detail.
(2) All assets and liabilities transferred into level 3 were previously classified within level 2.
(3) All assets and liabilities transferred out of level 3 are classified as level 2.
(4) Represents only net gains (losses) that are due to changes in economic conditions and management's estimates of fair value and excludes changes due to the collection/realization of cash flows over time.
(5) Included in net gains (losses) from trading activities in the income statement.
(6) Included in net gains (losses) on debt securities in the income statement.
(7) Included in mortgage banking and other noninterest income in the income statement.
(8) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).
(9) Included in mortgage banking, trading activities, equity securities and other noninterest income in the income statement.
(10) Included in net gains (losses) from equity securities in the income statement.

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Table 16.10 presents gross purchases, sales, issuances and settlements related to the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the first half of 2018.

Table 16.10: Gross Purchases, Sales, Issuances and Settlements – Level 3 – Six months ended June 30, 2018

(in millions)		Purchases	Sales	Issuances	Settlements	Net
Six months ended June 30, 2018						
Trading debt securities:						
Securities of U.S. states and political subdivisions	$	—	—	—	—	—
Collateralized loan obligations		271	(230)	—	(100)	(59)
Corporate debt securities		8	(2)	—	—	6
Other trading debt securities		—	—	—	—	—
Total trading debt securities		279	(232)	—	(100)	(53)
Available-for-sale debt securities:						
Securities of U.S. states and political subdivisions		—	(4)	10	(96)	(90)
Mortgage-backed securities:						
Residential		—	—	—	—	—
Commercial		—	—	—	(21)	(21)
Total mortgage-backed securities		—	—	—	(21)	(21)
Corporate debt securities		31	—	—	(1)	30
Collateralized loan and other debt obligations		—	—	—	(47)	(47)
Asset-backed securities:						
Other asset-backed securities		—	(8)	58	(215)	(165)
Total asset-backed securities		—	(8)	58	(215)	(165)
Total available-for-sale debt securities		31	(12)	68	(380)	(293)
Mortgage loans held for sale		47	(151)	167	(75)	(12)
Loans held for sale		—	(16)	—	—	(16)
Loans		1	—	8	(63)	(54)
Mortgage servicing rights (residential) (1)		—	(5)	1,059	—	1,054
Net derivative assets and liabilities:						
Interest rate contracts		—	—	—	296	296
Commodity contracts		—	—	—	(26)	(26)
Equity contracts		—	—	—	64	64
Foreign exchange contracts		—	—	—	3	3
Credit contracts		8	(4)	—	(12)	(8)
Total derivative contracts		8	(4)	—	325	329
Equity securities:						
Nonmarketable		—	(17)	—	(79)	(96)
Total equity securities		—	(17)	—	(79)	(96)
Other liabilities		—	—	—	—	—

(1) For more information on the changes in mortgage servicing rights, see Note 11 (Mortgage Banking Activities).

Table 16.11 and Table 16.12 provide quantitative information about the valuation techniques and significant unobservable inputs used in the valuation of substantially all of our Level 3 assets and liabilities measured at fair value on a recurring basis for which we use an internal model.

The significant unobservable inputs for Level 3 assets and liabilities that are valued using fair values obtained from third party vendors are not included in the table, as the specific inputs applied are not provided by the vendor. In addition, the table excludes the valuation techniques and significant unobservable inputs for certain classes of Level 3 assets and liabilities measured using an internal model that we consider, both individually and in the aggregate, insignificant relative to our overall Level 3 assets and liabilities. We made this determination based upon an evaluation of each class, which considered the magnitude of the positions, nature of the unobservable inputs and potential for significant changes in fair value due to changes in those inputs. For information on how changes in significant unobservable inputs affect the fair values of Level 3 assets and liabilities, see Note 18 (Fair Values of Assets and Liabilities) in our 2018 Form 10-K.

Table 16.11: Valuation Techniques – Recurring Basis – June 30, 2019

($ in millions, except cost to service amounts)	Fair Value Level 3		Valuation Technique(s)	Significant Unobservable Input	Range of Inputs				Weighted Average (1)
June 30, 2019									
Trading and available-for-sale debt securities:									
Securities of U.S. states and political subdivisions:									
Government, healthcare and other revenue bonds	$ 353		Discounted cash flow	Discount rate	1.5	-	6.2	%	3.0
	38		Vendor priced						
Collateralized loan and other debt obligations (2)	249		Market comparable pricing	Comparability adjustment	(11.3)	-	20.0		1.7
	649		Vendor priced						
Corporate debt securities	232		Discounted cash flow	Discount rate	2.0		14.9		8.5
	66		Market comparable pricing	Comparability adjustment	(14.0)		14.4		(2.8)
	129		Vendor priced						
Asset-backed securities:									
Diversified payment rights (3)	132		Discounted cash flow	Discount rate	2.5	-	4.9		3.4
Other commercial and consumer	194	(4)	Discounted cash flow	Discount rate	3.9	-	4.8		4.0
				Weighted average life	1.3	-	1.9	yrs	1.8
	15		Vendor priced						
Mortgage loans held for sale (residential)	1,101		Discounted cash flow	Default rate	0.0	-	18.4	%	0.8
				Discount rate	3.0	-	6.3		4.6
				Loss severity	0.0	-	46.4		25.0
				Prepayment rate	4.3	-	14.4		6.1
	14		Market comparable pricing	Comparability adjustment	(56.3)	-	(25.0)		(40.9)
Loans	202	(5)	Discounted cash flow	Discount rate	3.9	-	4.4		4.1
				Prepayment rate	4.4	-	100.0		85.6
				Loss severity	0.0	-	34.8		12.0
Mortgage servicing rights (residential)	12,096		Discounted cash flow	Cost to service per loan (6)	$ 63	-	482		104
				Discount rate	6.5	-	13.2	%	7.4
				Prepayment rate (7)	10.6	-	24.6		12.2
Net derivative assets and (liabilities):									
Interest rate contracts	111		Discounted cash flow	Default rate	0.0	-	5.0		2.0
				Loss severity	50.0	-	50.0		50.0
				Prepayment rate	2.8	-	25.0		15.3
Interest rate contracts: derivative loan commitments	94		Discounted cash flow	Fall-out factor	1.0	-	99.0		19.5
				Initial-value servicing	(40.5)	-	67.1	bps	12.3
Equity contracts	146		Discounted cash flow	Conversion factor	(8.9)	-	0.0	%	(8.3)
				Weighted average life	1.0	-	3.5	yrs	2.0
	(374)		Option model	Correlation factor	(77.0)	-	98.5	%	63.9
				Volatility factor	6.5	-	105.2		24.1
Credit contracts	2		Market comparable pricing	Comparability adjustment	(48.3)	-	29.6		(6.9)
	43		Option model	Credit spread	0.1	-	21.4		0.9
				Loss severity	13.0	-	60.0		45.6
Nonmarketable equity securities	7,110		Market comparable pricing	Comparability adjustment	(21.7)	-	(6.3)		(16.6)
Insignificant Level 3 assets, net of liabilities	26	(8)							
Total level 3 assets, net of liabilities	$ 22,628	(9)							

(1) Weighted averages are calculated using outstanding unpaid principal balance for cash instruments, such as loans and securities, and notional amounts for derivative instruments.
(2) Includes $649 million of collateralized debt obligations.
(3) Securities backed by specified sources of current and future receivables generated from foreign originators.
(4) Predominantly consists of investments in asset-backed securities that are revolving in nature, for which the timing of advances and repayments of principal are uncertain.
(5) Consists of reverse mortgage loans.
(6) The high end of the range of inputs is for servicing modified loans. For non-modified loans the range is $63 - $208.
(7) Includes a blend of prepayment speeds and expected defaults. Prepayment speeds are influenced by mortgage interest rates as well as our estimation of drivers of borrower behavior.
(8) Represents the aggregate amount of Level 3 assets and liabilities measured at fair value on a recurring basis that are individually and in the aggregate insignificant. The amount includes mortgage-backed securities, other trading positions, other liabilities and certain net derivative assets and liabilities, such as commodity contracts and foreign exchange contracts.
(9) Consists of total Level 3 assets of $24.9 billion and total Level 3 liabilities of $2.3 billion, before netting of derivative balances.

Table 16.12: Valuation Techniques – Recurring Basis – December 31, 2018

($ in millions, except cost to service amounts)	Fair Value Level 3		Valuation Technique(s)	Significant Unobservable Input	Range of Inputs				Weighted Average (1)
December 31, 2018									
Trading and available-for-sale debt securities:									
Securities of U.S. states and political subdivisions:									
Government, healthcare and other revenue bonds	$ 404		Discounted cash flow	Discount rate	2.1	-	6.4	%	3.4
	43		Vendor priced						
Collateralized loan and other debt obligations (2)	298		Market comparable pricing	Comparability adjustment	(13.5)	-	22.1		3.2
	739		Vendor priced						
Corporate debt securities	220		Discounted cash flow	Discount rate	4.0		11.7		8.5
	56		Market comparable pricing	Comparability adjustment	(11.3)		16.6		(1.4)
	128		Vendor priced						
Asset-backed securities:									
Diversified payment rights (3)	171		Discounted cash flow	Discount rate	3.4	-	6.2		4.4
Other commercial and consumer	198	(4)	Discounted cash flow	Discount rate	4.6	-	5.2		4.7
				Weighted average life	1.1	-	1.5	yrs	1.1
	20		Vendor priced						
Mortgage loans held for sale (residential)	982		Discounted cash flow	Default rate	0.0	-	15.6	%	0.8
				Discount rate	1.1	-	6.6		5.5
				Loss severity	—	-	43.3		23.4
				Prepayment rate	3.2	-	13.4		4.6
	15		Market comparable pricing	Comparability adjustment	(56.3)	-	(6.3)		(36.3)
Loans	244	(5)	Discounted cash flow	Discount rate	3.4	-	6.4		4.2
				Prepayment rate	2.9	-	100.0		87.2
				Loss severity	0.0	-	34.8		10.2
Mortgage servicing rights (residential)	14,649		Discounted cash flow	Cost to service per loan (6)	$ 62	-	507		106
				Discount rate	7.1	-	15.3	%	8.1
				Prepayment rate (7)	9.0	-	23.5		9.9
Net derivative assets and (liabilities):									
Interest rate contracts	(35)		Discounted cash flow	Default rate	0.0	-	5.0		2.0
				Loss severity	50.0	-	50.0		50.0
				Prepayment rate	2.8	-	25.0		13.8
Interest rate contracts: derivative loan commitments	60		Discounted cash flow	Fall-out factor	1.0	-	99.0		19.4
				Initial-value servicing	(36.6)	-	91.7	bps	18.5
Equity contracts	104		Discounted cash flow	Conversion factor	(9.3)	-	0.0	%	(7.8)
				Weighted average life	1.0	-	3.0	yrs	1.8
	(121)		Option model	Correlation factor	(77.0)	-	99.0	%	21.6
				Volatility factor	6.5	-	100.0		21.8
Credit contracts	3		Market comparable pricing	Comparability adjustment	(15.5)	-	40.0		3.5
	32		Option model	Credit spread	0.9	-	21.5		1.3
				Loss severity	13.0	-	60.0		45.2
Nonmarketable equity securities	5,468		Market comparable pricing	Comparability adjustment	(20.6)	-	(4.3)		(15.8)
Insignificant Level 3 assets, net of liabilities	93	(8)							
Total level 3 assets, net of liabilities	$ 23,771	(9)							

(1) Weighted averages are calculated using outstanding unpaid principal balance for cash instruments, such as loans and securities, and notional amounts for derivative instruments.
(2) Includes $800 million of collateralized debt obligations.
(3) Securities backed by specified sources of current and future receivables generated from foreign originators.
(4) Predominantly consists of investments in asset-backed securities that are revolving in nature, for which the timing of advances and repayments of principal are uncertain.
(5) Consists of reverse mortgage loans.
(6) The high end of the range of inputs is for servicing modified loans. For non-modified loans the range is $62 - $204.
(7) Includes a blend of prepayment speeds and expected defaults. Prepayment speeds are influenced by mortgage interest rates as well as our estimation of drivers of borrower behavior.
(8) Represents the aggregate amount of Level 3 assets and liabilities measured at fair value on a recurring basis that are individually and in the aggregate insignificant. The amount includes mortgage-backed securities, other trading positions, other liabilities and certain net derivative assets and liabilities, such as commodity contracts and foreign exchange contracts.
(9) Consists of total Level 3 assets of $25.3 billion and total Level 3 liabilities of $1.6 billion, before netting of derivative balances.

The valuation techniques used for our Level 3 assets and liabilities, as presented in the previous tables, are described as follows:

- Discounted cash flow – Discounted cash flow valuation techniques generally consist of developing an estimate of future cash flows that are expected to occur over the life of an instrument and then discounting those cash flows at a rate of return that results in the fair value amount.
- Market comparable pricing – Market comparable pricing valuation techniques are used to determine the fair value of certain instruments by incorporating known inputs, such as recent transaction prices, pending transactions, or prices of other similar investments that require significant adjustment to reflect differences in instrument characteristics.
- Option model – Option model valuation techniques are generally used for instruments in which the holder has a contingent right or obligation based on the occurrence of a future event, such as the price of a referenced asset going above or below a predetermined strike price. Option models estimate the likelihood of the specified event occurring by incorporating assumptions such as volatility estimates, price of the underlying instrument and expected rate of return.
- Vendor-priced – Prices obtained from third party pricing vendors or brokers that are used to record the fair value of the asset or liability for which the related valuation technique and significant unobservable inputs are not provided.

Significant unobservable inputs presented in the previous tables are those we consider significant to the fair value of the Level 3 asset or liability. We consider unobservable inputs to be significant if by their exclusion the fair value of the Level 3 asset or liability would be impacted by a predetermined percentage change. We also consider qualitative factors, such as nature of the instrument, type of valuation technique used, and the significance of the unobservable inputs relative to other inputs used within the valuation. Following is a description of the significant unobservable inputs provided in the table.

- Comparability adjustment – is an adjustment made to observed market data, such as a transaction price in order to reflect dissimilarities in underlying collateral, issuer, rating, or other factors used within a market valuation approach, expressed as a percentage of an observed price.
- Conversion Factor – is the risk-adjusted rate in which a particular instrument may be exchanged for another instrument upon settlement, expressed as a percentage change from a specified rate.
- Correlation factor – is the likelihood of one instrument changing in price relative to another based on an established relationship expressed as a percentage of relative change in price over a period over time.
- Cost to service – is the expected cost per loan of servicing a portfolio of loans, which includes estimates for unreimbursed expenses (including delinquency and foreclosure costs) that may occur as a result of servicing such loan portfolios.
- Credit spread – is the portion of the interest rate in excess of a benchmark interest rate, such as Overnight Index Swap (OIS), LIBOR or U.S. Treasury rates, that when applied to an investment captures changes in the obligor's creditworthiness.
- Default rate – is an estimate of the likelihood of not collecting contractual amounts owed expressed as a constant default rate (CDR).
- Discount rate – is a rate of return used to calculate the present value of the future expected cash flow to arrive at the fair value of an instrument. The discount rate consists of a benchmark rate component and a risk premium component. The benchmark rate component, for example, OIS, LIBOR or U.S. Treasury rates, is generally observable within the market and is necessary to appropriately reflect the time value of money. The risk premium component reflects the amount of compensation market participants require due to the uncertainty inherent in the instruments' cash flows resulting from risks such as credit and liquidity.
- Fall-out factor – is the expected percentage of loans associated with our interest rate lock commitment portfolio that are likely of not funding.
- Initial-value servicing – is the estimated value of the underlying loan, including the value attributable to the embedded servicing right, expressed in basis points of outstanding unpaid principal balance.
- Loss severity – is the estimated percentage of contractual cash flows lost in the event of a default.
- Prepayment rate – is the estimated rate at which forecasted prepayments of principal of the related loan or debt instrument are expected to occur, expressed as a constant prepayment rate (CPR).
- Volatility factor – is the extent of change in price an item is estimated to fluctuate over a specified period of time expressed as a percentage of relative change in price over a period over time.
- Weighted average life – is the weighted average number of years an investment is expected to remain outstanding based on its expected cash flows reflecting the estimated date the issuer will call or extend the maturity of the instrument or otherwise reflecting an estimate of the timing of an instrument's cash flows whose timing is not contractually fixed.

Assets and Liabilities Recorded at Fair Value on a Nonrecurring Basis

We may be required, from time to time, to measure certain assets at fair value on a nonrecurring basis in accordance with GAAP. These adjustments to fair value usually result from application of LOCOM accounting, write-downs of individual assets or use of the measurement alternative for nonmarketable equity securities.

Table 16.13 provides the fair value hierarchy and fair value at the date of the nonrecurring fair value adjustment for all assets that were still held as of June 30, 2019 and December 31, 2018, and for which a nonrecurring fair value adjustment was recorded during the six months ended June 30, 2019 and year ended December 31, 2018.

Table 16.13: Fair Value on a Nonrecurring Basis

				June 30, 2019				December 31, 2018
(in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Mortgage loans held for sale (LOCOM) (1)	$ —	1,865	3,148	5,013	—	1,213	1,233	2,446
Loans held for sale	—	26	—	26	—	313	—	313
Loans:								
Commercial	—	215	—	215	—	339	—	339
Consumer	—	164	1	165	—	346	1	347
Total loans (2)	—	379	1	380	—	685	1	686
Nonmarketable equity securities (3)	—	812	83	895	—	774	157	931
Other assets (4)	—	153	—	153	—	149	6	155
Total assets at fair value on a nonrecurring basis	$ —	3,235	3,232	6,467	—	3,134	1,397	4,531

(1) Consists of commercial mortgages and residential real estate 1-4 family first mortgage loans.
(2) Represents the carrying value of loans for which nonrecurring adjustments are based on the appraised value of the collateral.
(3) Consists of certain nonmarketable equity securities that are measured at fair value on a nonrecurring basis, including observable price adjustments for nonmarketable equity securities carried under the measurement alternative.
(4) Includes the fair value of foreclosed real estate, other collateral owned and operating lease assets.

Table 16.14 presents the increase (decrease) in value of certain assets held at the end of the respective reporting periods presented for which a nonrecurring fair value adjustment was recognized during the periods presented.

Table 16.14: Change in Value of Assets with Nonrecurring Fair Value Adjustment

	Six months ended June 30,	
(in millions)	2019	2018
Mortgage loans held for sale (LOCOM)	$ 18	13
Loans held for sale	(2)	(78)
Loans:		
Commercial	(106)	(138)
Consumer	(121)	(185)
Total loans (1)	(227)	(323)
Nonmarketable equity securities (2)	264	(17)
Other assets (3)	(29)	(30)
Total	$ 24	(435)

(1) Represents write-downs of loans based on the appraised value of the collateral.
(2) Includes impairment losses for nonmarketable equity securities accounted for under the equity method and measurement alternative. Also includes observable price adjustments for nonmarketable equity securities accounted for under the measurement alternative.
(3) Includes the losses on foreclosed real estate and other collateral owned that were measured at fair value subsequent to their initial classification as foreclosed assets.

Table 16.15 provides quantitative information about the valuation techniques and significant unobservable inputs used in the valuation of substantially all of our Level 3 assets that are measured at fair value on a nonrecurring basis using an internal model. The table is limited to financial instruments that had nonrecurring fair value adjustments during the periods presented.

We have excluded from the table valuation techniques and significant unobservable inputs for certain classes of Level 3 assets measured using an internal model that we consider, both individually and in the aggregate, insignificant relative to our overall Level 3 nonrecurring measurements. We made this determination based upon an evaluation of each class that considered the magnitude of the positions, nature of the unobservable inputs and potential for significant changes in fair value due to changes in those inputs.

Table 16.15: Valuation Techniques – Nonrecurring Basis

($ in millions)		Fair Value Level 3		Valuation Technique(s) (1)	Significant Unobservable Inputs (1)		Range of inputs			Weighted Average (2)
June 30, 2019										
Residential mortgage loans held for sale (LOCOM)	**$**	**3,148**	**(3)**	**Discounted cash flow**	**Default rate**	**(4)**	**0.3**	**—**	**5.7%**	**1.4%**
					Discount rate		**1.5**	**—**	**9.5**	**4.8**
					Loss severity		**0.5**	**—**	**62.3**	**24.7**
					Prepayment rate	**(5)**	**5.1**	**—**	**100.0**	**21.6**
Nonmarketable equity securities		**—**		**Discounted cash flow**	**Discount rate**		**—**	**—**	**—**	**—**
Insignificant level 3 assets		**84**								
Total	**$**	**3,232**								
December 31, 2018										
Residential mortgage loans held for sale (LOCOM)	$	1,233	(3)	Discounted cash flow	Default rate	(4)	0.2	—	2.3%	1.4%
					Discount rate		1.5	—	8.5	4.0
					Loss severity		0.5	—	66.0	1.7
					Prepayment rate	(5)	3.5	—	100.0	46.5
Nonmarketable equity securities		7		Discounted cash flow	Discount rate		10.5	—	10.5	10.5
Insignificant level 3 assets		157								
Total	$	1,397								

(1) Refer to the narrative following Table 16.12 for a definition of the valuation technique(s) and significant unobservable inputs.
(2) For residential MLHFS, weighted averages are calculated using the outstanding unpaid principal balance of the loans.
(3) Consists of approximately $1.3 billion and $1.2 billion of government insured/guaranteed loans purchased from GNMA-guaranteed mortgage securitizations at June 30, 2019, and December 31, 2018, respectively, and $1.8 billion and $27 million, respectively, of other mortgage loans that are not government insured/guaranteed.
(4) Applies only to non-government insured/guaranteed loans.
(5) Includes the impact on prepayment rate of expected defaults for government insured/guaranteed loans, which impact the frequency and timing of early resolution of loans.

Fair Value Option

The fair value option is an irrevocable election, generally only permitted upon initial recognition of financial assets or liabilities, to measure eligible financial instruments at fair value with changes in fair value reflected in earnings. We may elect the fair value option to align the measurement model with how the financial assets or liabilities are managed or to reduce complexity or accounting asymmetry. For more information, including the basis for our fair value option elections, see Note 18 (Fair Values of Assets and Liabilities) in our 2018 Form 10-K.

Table 16.16 reflects differences between the fair value carrying amount of the assets for which we have elected the fair value option and the contractual aggregate unpaid principal amount at maturity.

Table 16.16: Fair Value Option

			June 30, 2019			December 31, 2018
(in millions)	Fair value carrying amount	Aggregate unpaid principal	Fair value carrying amount less aggregate unpaid principal	Fair value carrying amount	Aggregate unpaid principal	Fair value carrying amount less aggregate unpaid principal
Mortgage loans held for sale:						
Total loans	$ 16,343	15,906	437	11,771	11,573	198
Nonaccrual loans	130	155	(25)	127	158	(31)
Loans 90 days or more past due and still accruing	8	10	(2)	7	9	(2)
Loans held for sale:						
Total loans	1,118	1,166	(48)	1,469	1,536	(67)
Nonaccrual loans	57	65	(8)	21	32	(11)
Loans:						
Total loans	202	231	(29)	244	274	(30)
Nonaccrual loans	150	179	(29)	179	208	(29)

The assets accounted for under the fair value option are initially measured at fair value. Gains and losses from initial measurement and subsequent changes in fair value are recognized in earnings. The changes in fair value related to initial measurement and subsequent changes in fair value included in earnings for these assets measured at fair value are shown in Table 16.17 by income statement line item. Amounts recorded as interest income are excluded from Table 16.17.

Table 16.17: Fair Value Option – Changes in Fair Value Included in Earnings

			2019			2018
(in millions)	Mortgage banking noninterest income	Net gains (losses) from trading activities	Other noninterest income	Mortgage banking noninterest income	Net gains (losses) from trading activities	Other noninterest income
Quarter ended June 30,						
Mortgage loans held for sale	$ 379	—	—	114	—	—
Loans held for sale	—	(4)	—	—	9	—
Loans	—	—	1	—	—	—
Other interests held (1)	—	(1)	—	—	(1)	—
Six months ended June 30,						
Mortgage loans held for sale	$ 593	—	—	55	—	—
Loans held for sale	—	10	1	—	15	—
Loans	—	—	1	—	—	(1)
Other interests held (1)	—	(2)	—	—	(2)	—

(1) Includes retained interests in securitizations.

For performing loans, instrument-specific credit risk gains or losses were derived principally by determining the change in fair value of the loans due to changes in the observable or implied credit spread. Credit spread is the market yield on the loans less the relevant risk-free benchmark interest rate. For nonperforming loans, we attribute all changes in fair value to instrument-specific credit risk. Table 16.18 shows the estimated gains and losses from earnings attributable to instrument-specific credit risk related to assets accounted for under the fair value option.

Table 16.18: Fair Value Option – Gains/Losses Attributable to Instrument-Specific Credit Risk

	Quarter ended June 30,		Six months ended June 30,	
(in millions)	2019	2018	2019	2018
Gains (losses) attributable to instrument-specific credit risk:				
Mortgage loans held for sale	$ 16	(2)	12	(1)
Loans held for sale	(3)	9	11	15
Total	$ 13	7	23	14

Disclosures about Fair Value of Financial Instruments

Table 16.19 is a summary of fair value estimates for financial instruments, excluding financial instruments recorded at fair value on a recurring basis, as they are included within Table 16.2 in this Note. The carrying amounts in the following table are recorded on the balance sheet under the indicated captions.

We have not included assets and liabilities that are not financial instruments in our disclosure, such as the value of the long-term relationships with our deposit, credit card and trust customers, amortized MSRs, premises and equipment, goodwill and other intangibles, deferred taxes and other liabilities.

The total of the fair value calculations presented does not represent, and should not be construed to represent, the underlying value of the Company.

Table 16.19: Fair Value Estimates for Financial Instruments

(in millions)		Carrying amount	Estimated fair value Level 1	Level 2	Level 3	Total
June 30, 2019						
Financial assets						
Cash and due from banks (1)	**$**	**20,880**	**20,880**	**—**	**—**	**20,880**
Interest-earning deposits with banks (1)		**143,547**	**143,312**	**235**	**—**	**143,547**
Federal funds sold and securities purchased under resale agreements (1)		**112,119**	**—**	**112,119**	**—**	**112,119**
Held-to-maturity debt securities		**145,876**	**45,336**	**101,943**	**585**	**147,864**
Mortgage loans held for sale		**6,655**	**—**	**3,548**	**4,102**	**7,650**
Loans held for sale		**63**	**—**	**63**	**—**	**63**
Loans, net (2)		**920,977**	**—**	**49,839**	**878,601**	**928,440**
Nonmarketable equity securities (cost method)		**5,622**	**—**	**—**	**5,654**	**5,654**
Total financial assets	**$**	**1,355,739**	**209,528**	**267,747**	**888,942**	**1,366,217**
Financial liabilities						
Deposits (3)	**$**	**139,343**	**—**	**106,653**	**32,549**	**139,202**
Short-term borrowings		**115,344**	**—**	**115,345**	**—**	**115,345**
Long-term debt (4)		**241,441**	**—**	**242,529**	**1,626**	**244,155**
Total financial liabilities	**$**	**496,128**	**—**	**464,527**	**34,175**	**498,702**
December 31, 2018						
Financial assets						
Cash and due from banks (1)	$	23,551	23,551	—	—	23,551
Interest-earning deposits with banks (1)		149,736	149,542	194	—	149,736
Federal funds sold and securities purchased under resale agreements (1)		80,207	—	80,207	—	80,207
Held-to-maturity debt securities		144,788	44,339	97,275	501	142,115
Mortgage loans held for sale		3,355	—	2,129	1,233	3,362
Loans held for sale		572	—	572	—	572
Loans, net (2)		923,703	—	45,190	872,725	917,915
Nonmarketable equity securities (cost method)		5,643	—	—	5,675	5,675
Total financial assets	$	1,331,555	217,432	225,567	880,134	1,323,133
Financial liabilities						
Deposits (3)	$	130,645	—	107,448	22,641	130,089
Short-term borrowings		105,787	—	105,789	—	105,789
Long-term debt (4)		229,008	—	225,904	2,230	228,134
Total financial liabilities	$	465,440	—	439,141	24,871	464,012

(1) Amounts consist of financial instruments for which carrying value approximates fair value.
(2) Excludes lease financing with a carrying amount of $19.0 billion and $19.7 billion at June 30, 2019, and December 31, 2018, respectively.
(3) Excludes deposit liabilities with no defined or contractual maturity of $1.1 trillion and $1.2 trillion at June 30, 2019 and December 31, 2018, respectively.
(4) Excludes capital lease obligations under capital leases of $35 million and $36 million at June 30, 2019, and December 31, 2018, respectively.

Loan commitments, standby letters of credit and commercial and similar letters of credit are not included in Table 16.19. A reasonable estimate of the fair value of these instruments is the carrying value of deferred fees plus the allowance for unfunded credit commitments, which totaled $1.0 billion at both June 30, 2019, and December 31, 2018.

Note 17: Preferred Stock

We are authorized to issue 20 million shares of preferred stock and 4 million shares of preference stock, both without par value. Preferred shares outstanding rank senior to common shares both as to dividends and liquidation preference but have no general voting rights. We have not issued any preference shares under this authorization. If issued, preference shares would be limited to one vote per share. Our total authorized, issued and outstanding preferred stock is presented in the following two tables along with the Employee Stock Ownership Plan (ESOP) Cumulative Convertible Preferred Stock.

Table 17.1: Preferred Stock Shares

	June 30, 2019		December 31, 2018	
	Liquidation preference per share	**Shares authorized and designated**	Liquidation preference per share	Shares authorized and designated
DEP Shares				
Dividend Equalization Preferred Shares (DEP)	**$ 10**	**97,000**	$ 10	97,000
Series I				
Floating Class A Preferred Stock (1)	**100,000**	**25,010**	100,000	25,010
Series K				
Floating Non-Cumulative Perpetual Class A Preferred Stock (2)	**1,000**	**3,500,000**	1,000	3,500,000
Series L				
7.50% Non-Cumulative Perpetual Convertible Class A Preferred Stock	**1,000**	**4,025,000**	1,000	4,025,000
Series N				
5.20% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**30,000**	25,000	30,000
Series O				
5.125% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**27,600**	25,000	27,600
Series P				
5.25% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**26,400**	25,000	26,400
Series Q				
5.85% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**69,000**	25,000	69,000
Series R				
6.625% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**34,500**	25,000	34,500
Series S				
5.90% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**80,000**	25,000	80,000
Series T				
6.00% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**32,200**	25,000	32,200
Series U				
5.875% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**80,000**	25,000	80,000
Series V				
6.00% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**40,000**	25,000	40,000
Series W				
5.70% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**40,000**	25,000	40,000
Series X				
5.50% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**46,000**	25,000	46,000
Series Y				
5.625% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**27,600**	25,000	27,600
ESOP				
Cumulative Convertible Preferred Stock (3)	**—**	**1,213,418**	—	1,406,460
Total		**9,393,728**		9,586,770

(1) Series I preferred stock issuance relates to trust preferred securities. See Note 10 (Securitizations and Variable Interest Entities) for additional information. This issuance has a floating interest rate that is the greater of three-month LIBOR plus 0.93% and 5.56975%.
(2) Floating rate for Preferred Stock, Series K, is three-month LIBOR plus 3.77%.
(3) See the ESOP Cumulative Convertible Preferred Stock section in this Note for additional information about the liquidation preference for the ESOP Cumulative Convertible Preferred Stock.

Table 17.2: Preferred Stock – Shares Issued and Carrying Value

(in millions, except shares)	June 30, 2019 Shares issued and outstanding	Liquidation preference value	Carrying value	Discount	December 31, 2018 Shares issued and outstanding	Liquidation preference value	Carrying value	Discount
DEP Shares								
Dividend Equalization Preferred Shares (DEP)	**96,546**	**$ —**	**—**	**—**	96,546	$ —	—	—
Series I (1)(2)								
Floating Class A Preferred Stock	**25,010**	**2,501**	**2,501**	**—**	25,010	2,501	2,501	—
Series K (1)(3)								
Floating Non-Cumulative Perpetual Class A Preferred Stock	**3,352,000**	**3,352**	**2,876**	**476**	3,352,000	3,352	2,876	476
Series L (1)								
7.50% Non-Cumulative Perpetual Convertible Class A Preferred Stock	**3,967,995**	**3,968**	**3,200**	**768**	3,968,000	3,968	3,200	768
Series N (1)								
5.20% Non-Cumulative Perpetual Class A Preferred Stock	**30,000**	**750**	**750**	**—**	30,000	750	750	—
Series O (1)								
5.125% Non-Cumulative Perpetual Class A Preferred Stock	**26,000**	**650**	**650**	**—**	26,000	650	650	—
Series P (1)								
5.25% Non-Cumulative Perpetual Class A Preferred Stock	**25,000**	**625**	**625**	**—**	25,000	625	625	—
Series Q (1)								
5.85% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**69,000**	**1,725**	**1,725**	**—**	69,000	1,725	1,725	—
Series R (1)								
6.625% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**33,600**	**840**	**840**	**—**	33,600	840	840	—
Series S (1)								
5.90% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**80,000**	**2,000**	**2,000**	**—**	80,000	2,000	2,000	—
Series T (1)								
6.00% Non-Cumulative Perpetual Class A Preferred Stock	**32,000**	**800**	**800**	**—**	32,000	800	800	—
Series U (1)								
5.875% Fixed-to-Floating Non-Cumulative Perpetual Class A Preferred Stock	**80,000**	**2,000**	**2,000**	**—**	80,000	2,000	2,000	—
Series V (1)								
6.00% Non-Cumulative Perpetual Class A Preferred Stock	**40,000**	**1,000**	**1,000**	**—**	40,000	1,000	1,000	—
Series W (1)								
5.70% Non-Cumulative Perpetual Class A Preferred Stock	**40,000**	**1,000**	**1,000**	**—**	40,000	1,000	1,000	—
Series X (1)								
5.50% Non-Cumulative Perpetual Class A Preferred Stock	**46,000**	**1,150**	**1,150**	**—**	46,000	1,150	1,150	—
Series Y (1)								
5.625% Non-Cumulative Perpetual Class A Preferred Stock	**27,600**	**690**	**690**	**—**	27,600	690	690	—
ESOP								
Cumulative Convertible Preferred Stock	**1,213,418**	**1,214**	**1,214**	**—**	1,406,460	1,407	1,407	—
Total	**9,184,169**	**$ 24,265**	**23,021**	**1,244**	9,377,216	$ 24,458	23,214	1,244

(1) Preferred shares qualify as Tier 1 capital.
(2) Floating rate for Preferred Stock, Series I, is the greater of three-month LIBOR plus 0.93% and 5.56975%.
(3) Floating rate for Preferred Stock, Series K, is three-month LIBOR plus 3.77%.

ESOP CUMULATIVE CONVERTIBLE PREFERRED STOCK All shares of our ESOP Cumulative Convertible Preferred Stock (ESOP Preferred Stock) were issued to a trustee acting on behalf of the Wells Fargo & Company 401(k) Plan (the 401(k) Plan). Dividends on the ESOP Preferred Stock are cumulative from the date of initial issuance and are payable quarterly at annual rates based upon the year of issuance. Each share of ESOP Preferred Stock released from the unallocated reserve of the 401(k) Plan is converted into shares of our common stock based on the stated value of the ESOP Preferred Stock and the then current market price of our common stock. The ESOP Preferred Stock is also convertible at the option of the holder at any time, unless previously redeemed. We have the option to redeem the ESOP Preferred Stock at any time, in whole or in part, at a redemption price per share equal to the higher of (a) $1,000 per share plus accrued and unpaid dividends or (b) the fair market value, as defined in the Certificates of Designation for the ESOP Preferred Stock.

Table 17.3: ESOP Preferred Stock

	Shares issued and outstanding		Carrying value		Adjustable dividend rate	
(in millions, except shares)	**Jun 30, 2019**	Dec 31, 2018	**Jun 30, 2019**	Dec 31, 2018	Minimum	Maximum
ESOP Preferred Stock						
$1,000 liquidation preference per share						
2018	**336,945**	336,945	**337**	337	7.00%	8.00%
2017	**222,210**	222,210	**222**	222	7.00	8.00
2016	**227,450**	233,835	**228**	234	9.30	10.30
2015	**116,784**	144,338	**117**	144	8.90	9.90
2014	**136,151**	174,151	**136**	174	8.70	9.70
2013	**97,948**	133,948	**98**	134	8.50	9.50
2012	**49,134**	77,634	**49**	78	10.00	11.00
2011	**26,796**	61,796	**27**	62	9.00	10.00
2010 (1)	**—**	21,603	**—**	22	9.50	10.50
Total ESOP Preferred Stock (2)	**1,213,418**	1,406,460	**$ 1,214**	1,407		
Unearned ESOP shares (3)			**$ (1,292)**	(1,502)		

(1) In April 2019, all of the 2010 ESOP Preferred Stock was converted into common stock.
(2) At June 30, 2019 and December 31, 2018, additional paid-in capital included $78 million and $95 million, respectively, related to ESOP preferred stock.
(3) We recorded a corresponding charge to unearned ESOP shares in connection with the issuance of the ESOP Preferred Stock. The unearned ESOP shares are reduced as shares of the ESOP Preferred Stock are committed to be released.

Note 18: Revenue from Contracts with Customers

Our revenue includes net interest income on financial instruments and noninterest income. Table 18.1 presents our revenue by operating segment. The “Other” segment for each of the tables below includes the elimination of certain items that are included in more than one business segment, substantially all of which represents products and services for WIM customers served through Community Banking distribution channels. For additional description of our operating segments, including additional financial information and the underlying management accounting process, see Note 22 (Operating Segments).

We adopted ASU 2014-09 – *Revenue from Contracts with Customers* on a modified retrospective basis as of January 1, 2018. For details on the impact of the adoption of this ASU, see Note 1 (Summary of Significant Accounting Policies) in our 2018 Form 10-K.

Table 18.1: Revenue by Operating Segment

										Quarter ended June 30,
	Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Net interest income (1)	**$ 7,066**	7,346	**4,535**	4,693	**1,037**	1,111	**(543)**	(609)	**12,095**	12,541
Noninterest income:										
Service charges on deposit accounts	**704**	632	**502**	530	**4**	5	**(4)**	(4)	**1,206**	1,163
Trust and investment fees:										
Brokerage advisory, commissions and other fees	**480**	465	**74**	78	**2,248**	2,284	**(484)**	(473)	**2,318**	2,354
Trust and investment management	**199**	220	**117**	110	**687**	731	**(208)**	(226)	**795**	835
Investment banking	**(18)**	—	**475**	485	**(1)**	1	**(1)**	—	**455**	486
Total trust and investment fees	**661**	685	**666**	673	**2,934**	3,016	**(693)**	(699)	**3,568**	3,675
Card fees	**929**	904	**95**	96	**2**	2	**(1)**	(1)	**1,025**	1,001
Other fees:										
Lending related charges and fees (1)(2)	**65**	69	**284**	307	**2**	2	**(2)**	(2)	**349**	376
Cash network fees	**117**	118	**—**	2	**—**	—	**—**	—	**117**	120
Commercial real estate brokerage commissions	**—**	—	**105**	109	**—**	—	**—**	—	**105**	109
Wire transfer and other remittance fees	**71**	67	**49**	53	**2**	2	**(1)**	(1)	**121**	121
All other fees(1)	**82**	94	**26**	25	**—**	1	**—**	—	**108**	120
Total other fees	**335**	348	**464**	496	**4**	5	**(3)**	(3)	**800**	846
Mortgage banking (1)	**655**	695	**104**	75	**(3)**	(2)	**2**	2	**758**	770
Insurance (1)	**11**	16	**75**	78	**17**	18	**(10)**	(10)	**93**	102
Net gains (losses) from trading activities (1)	**(11)**	24	**226**	154	**13**	13	**1**	—	**229**	191
Net gains (losses) on debt securities (1)	**15**	(2)	**5**	42	**—**	1	**—**	—	**20**	41
Net gains from equity securities (1)	**471**	409	**116**	89	**35**	(203)	**—**	—	**622**	295
Lease income (1)	**—**	—	**424**	443	**—**	—	**—**	—	**424**	443
Other income of the segment (1)	**969**	749	**(147)**	(172)	**7**	(15)	**(85)**	(77)	**744**	485
Total noninterest income	**4,739**	4,460	**2,530**	2,504	**3,013**	2,840	**(793)**	(792)	**9,489**	9,012
Revenue	**$ 11,805**	11,806	**7,065**	7,197	**4,050**	3,951	**(1,336)**	(1,401)	**21,584**	21,553

										Six months ended June 30,
	Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Net interest income (1)	**$ 14,314**	14,541	**9,069**	9,225	**2,138**	2,223	**(1,115)**	(1,210)	**24,406**	24,779
Noninterest income:										
Service charges on deposit accounts	**1,314**	1,271	**985**	1,064	**8**	9	**(7)**	(8)	**2,300**	2,336
Trust and investment fees:										
Brokerage advisory, commissions and other fees	**929**	943	**152**	145	**4,372**	4,628	**(942)**	(959)	**4,511**	4,757
Trust and investment management	**409**	453	**231**	223	**1,363**	1,474	**(422)**	(465)	**1,581**	1,685
Investment banking	**(38)**	(10)	**887**	925	**4**	1	**(4)**	—	**849**	916
Total trust and investment fees	**1,300**	1,386	**1,270**	1,293	**5,739**	6,103	**(1,368)**	(1,424)	**6,941**	7,358
Card fees	**1,787**	1,725	**181**	183	**3**	3	**(2)**	(2)	**1,969**	1,909
Other fees:										
Lending related charges and fees (1)(2)	**130**	145	**566**	611	**4**	4	**(4)**	(4)	**696**	756
Cash network fees	**226**	243	**—**	3	**—**	—	**—**	—	**226**	246
Commercial real estate brokerage commissions	**—**	—	**186**	194	**—**	—	**—**	—	**186**	194
Wire transfer and other remittance fees	**135**	130	**97**	105	**4**	4	**(2)**	(2)	**234**	237
All other fees (1)	**176**	157	**52**	55	**—**	1	**—**	—	**228**	213
Total other fees	**667**	675	**901**	968	**8**	9	**(6)**	(6)	**1,570**	1,646
Mortgage banking (1)	**1,296**	1,537	**172**	168	**(6)**	(5)	**4**	4	**1,466**	1,704
Insurance (1)	**22**	44	**153**	157	**34**	36	**(20)**	(21)	**189**	216
Net gains (losses) from trading activities (1)	**(6)**	23	**559**	379	**32**	32	**1**	—	**586**	434
Net gains on debt securities (1)	**52**	(2)	**93**	43	**—**	1	**—**	—	**145**	42
Net gains from equity securities (1)	**1,072**	1,093	**193**	182	**171**	(197)	**—**	—	**1,436**	1,078
Lease income (1)	**—**	—	**867**	898	**—**	—	**—**	—	**867**	898
Other income of the segment (1)	**1,737**	1,343	**(267)**	(84)	**2**	(21)	**(154)**	(151)	**1,318**	1,087
Total noninterest income	**9,241**	9,095	**5,107**	5,251	**5,991**	5,970	**(1,552)**	(1,608)	**18,787**	18,708
Revenue	**$ 23,555**	23,636	**14,176**	14,476	**8,129**	8,193	**(2,667)**	(2,818)	**43,193**	43,487

(1) Most of our revenue is not within the scope of Accounting Standards Update (ASU) 2014-09 – *Revenue from Contracts with Customers*, and additional details are included in other footnotes to our financial statements. The scope explicitly excludes net interest income as well as many other revenues for financial assets and liabilities, including loans, leases, securities, and derivatives.
(2) Represents combined amount of previously reported “Charges and fees on loans” and “Letters of credit fees.”

We provide services to customers which have related performance obligations that we complete to recognize revenue. Our revenues are generally recognized either immediately upon the completion of our service or over time as we perform services. Any services performed over time generally require that we render services each period and therefore we measure our progress in completing these services based upon the passage of time.

SERVICE CHARGES ON DEPOSIT ACCOUNTS are earned on depository accounts for commercial and consumer customers and include fees for account and overdraft services. Account charges include fees for periodic account maintenance activities and event-driven services such as stop payment fees. Our obligation for event-driven services is satisfied at the time of the event when the service is delivered, while our obligation for maintenance services is satisfied over the course of each month. Our obligation for overdraft services is satisfied at the time of the overdraft.

Table 18.2 presents our service charges on deposit accounts by operating segment.

Table 18.2: Service Charges on Deposit Accounts by Operating Segment

	Quarter ended June 30,										
		Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)		**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Overdraft fees	$	**496**	416	**1**	1	**1**	1	**—**	—	**498**	418
Account charges		**208**	216	**501**	529	**3**	4	**(4)**	(4)	**708**	745
Service charges on deposit accounts	$	**704**	632	**502**	530	**4**	5	**(4)**	(4)	**1,206**	1,163
	Six months ended June 30,										
		Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)		**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Overdraft fees	$	**913**	828	**2**	3	**1**	1	**—**	—	**916**	832
Account charges		**401**	443	**983**	1,061	**7**	8	**(7)**	(8)	**1,384**	1,504
Service charges on deposit accounts	$	**1,314**	1,271	**985**	1,064	**8**	9	**(7)**	(8)	**2,300**	2,336

BROKERAGE ADVISORY, COMMISSIONS AND OTHER FEES are earned for providing full-service and discount brokerage services predominantly to retail brokerage clients. These revenues include fees earned on asset-based and transactional accounts and other brokerage advisory services.

Asset-based revenues are charged based on the market value of the client's assets. The services and related obligations associated with certain of these revenues, which include investment advice, active management of client assets, or assistance with selecting and engaging a third-party advisory manager, are generally satisfied over a month or quarter. The remaining revenues include trailing commissions which are earned for selling shares to investors. Our obligation associated with earning trailing commissions is satisfied at the time shares are sold. However, these fees are received and recognized over time during the period the customer owns the shares and we remain the broker of record. The amount of trailing commissions is variable based on the length of time the customer holds the shares and on changes in the value of the underlying assets.

Transactional revenues are earned for executing transactions at the client's direction. Our obligation is generally satisfied upon the execution of the transaction and the fees are based on the size and number of transactions executed.

Other revenues earned from other brokerage advisory services include omnibus and networking fees received from mutual fund companies in return for providing record keeping and other administrative services, and annual account maintenance fees charged to customers.

Table 18.3 presents our brokerage advisory, commissions and other fees by operating segment.

Table 18.3: Brokerage Advisory, Commissions and Other Fees by Operating Segment

		Quarter ended June 30,									
		Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)		**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Asset-based revenue (1)	$	**369**	365	**—**	—	**1,698**	1,722	**(369)**	(365)	**1,698**	1,722
Transactional revenue		**94**	83	**10**	16	**390**	400	**(98)**	(92)	**396**	407
Other revenue		**17**	17	**64**	62	**160**	162	**(17)**	(16)	**224**	225
Brokerage advisory, commissions and other fees	$	**480**	465	**74**	78	**2,248**	2,284	**(484)**	(473)	**2,318**	2,354

		Six months ended June 30,									
		Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)		**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Asset-based revenue (1)	$	**712**	736	**—**	—	**3,278**	3,465	**(712)**	(736)	**3,278**	3,465
Transactional revenue		**183**	176	**26**	28	**777**	839	**(196)**	(192)	**790**	851
Other revenue		**34**	31	**126**	117	**317**	324	**(34)**	(31)	**443**	441
Brokerage advisory, commissions and other fees	$	**929**	943	**152**	145	**4,372**	4,628	**(942)**	(959)	**4,511**	4,757

(1) We earned trailing commissions of $289 million and $569 million for the second quarter and first half of 2019, respectively, and $321 million and $652 million for the second quarter and first half of 2018, respectively.

TRUST AND INVESTMENT MANAGEMENT FEES are earned for providing trust, investment management and other related services.

Investment management services include managing and administering assets, including mutual funds, and institutional separate accounts. Fees for these services are generally determined based on a tiered scale relative to the market value of assets under management (AUM). In addition to AUM, we have client assets under administration (AUA) that earn various administrative fees which are generally based on the extent of the services provided to administer the account. Services with AUM and AUA-based fees are generally performed over time.

Trust services include acting as a trustee or agent for corporate trust, personal trust, and agency assets. Obligations for trust services are generally satisfied over time, while obligations for activities that are transactional in nature are satisfied at the time of the transaction.

Other related services include the custody and safekeeping of accounts. Our obligation for these services is generally satisfied over time.

Table 18.4 presents our trust and investment management fees by operating segment.

Table 18.4: Trust and Investment Management Fees by Operating Segment

		Quarter ended June 30,									
		Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)		**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Investment management fees	$	**(1)**	—	**—**	—	**501**	531	**—**	—	**500**	531
Trust fees		**200**	232	**83**	82	**175**	185	**(208)**	(226)	**250**	273
Other revenue		**—**	(12)	**34**	28	**11**	15	**—**	—	**45**	31
Trust and investment management fees	$	**199**	220	**117**	110	**687**	731	**(208)**	(226)	**795**	835

		Six months ended June 30,									
		Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)		**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Investment management fees	$	**—**	—	**—**	—	**978**	1,065	**—**	—	**978**	1,065
Trust fees		**409**	453	**165**	168	**343**	373	**(422)**	(465)	**495**	529
Other revenue		**—**	—	**66**	55	**42**	36	**—**	—	**108**	91
Trust and investment management fees	$	**409**	453	**231**	223	**1,363**	1,474	**(422)**	(465)	**1,581**	1,685

Note 18: Revenue from Contracts with Customers (*continued*)

INVESTMENT BANKING FEES are earned for underwriting debt and equity securities, arranging loan syndications and performing other advisory services. Our obligation for these services is generally satisfied at closing of the transaction. Substantially all of these fees are in the Wholesale Banking operating segment.

CARD FEES include credit and debit card interchange and network revenues and various card-related fees. Credit and debit card interchange and network revenues are earned on credit and debit card transactions conducted through payment networks such as Visa, MasterCard, and American Express. Our obligation is satisfied concurrently with the delivery of services on a daily basis.

Table 18.5 presents our card fees by operating segment.

Table 18.5: Card Fees by Operating Segment

	Quarter ended June 30,									
	Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Credit card interchange and network revenues (1)	**$ 209**	211	**95**	96	**2**	2	**(1)**	(1)	**305**	308
Debit card interchange and network revenues	**546**	525	**—**	—	**—**	—	**—**	—	**546**	525
Late fees, cash advance fees, balance transfer fees, and annual fees	**174**	168	**—**	—	**—**	—	**—**	—	**174**	168
Card fees (1)	**$ 929**	904	**95**	96	**2**	2	**(1)**	(1)	**1,025**	1,001
	Six months ended June 30,									
	Community Banking		Wholesale Banking		Wealth and Investment Management		Other		Consolidated Company	
(in millions)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Credit card interchange and network revenues (1)	**$ 398**	382	**181**	183	**3**	3	**(2)**	(2)	**580**	566
Debit card interchange and network revenues	**1,053**	1,004	**—**	—	**—**	—	**—**	—	**1,053**	1,004
Late fees, cash advance fees, balance transfer fees, and annual fees	**336**	339	**—**	—	**—**	—	**—**	—	**336**	339
Card fees (1)	**$ 1,787**	1,725	**181**	183	**3**	3	**(2)**	(2)	**1,969**	1,909

(1) The cost of credit card rewards and rebates of $375 million and $729 million for the second quarter and first half of 2019, respectively, and $335 million and $678 million for the second quarter and first half of 2018, respectively, are presented net against the related revenues.

CASH NETWORK FEES are earned for processing ATM transactions. Our obligation is completed daily upon settlement of ATM transactions. All of these fees are in the Community Banking operating segment.

COMMERCIAL REAL ESTATE BROKERAGE COMMISSIONS are earned for assisting customers in the sale of real estate property. Our obligation is satisfied upon the successful brokering of a transaction. Fees are based on a fixed percentage of the sales price. All of these fees are in the Wholesale Banking operating segment.

WIRE TRANSFER AND OTHER REMITTANCE FEES consist of fees earned for funds transfer services and issuing cashier's checks and money orders. Our obligation is satisfied at the time of the funds transfer services or upon issuance of the cashier's check or money order. Substantially all of these fees are in the Community Banking and Wholesale Banking operating segments.

ALL OTHER FEES include various types of fees earned on services to customers which have related performance obligations that we complete to recognize revenue. A majority portion of the revenue is earned from providing business payroll services and merchant services, which are generally recognized over time as we perform the services. Most of these fees are in the Community Banking operating segment.

Note 19: Employee Benefits

We sponsor a frozen noncontributory qualified defined benefit retirement plan, the Wells Fargo & Company Cash Balance Plan (Cash Balance Plan), which covers eligible employees of Wells Fargo. The Cash Balance Plan was frozen on July 1, 2009, and no new benefits accrue after that date. For additional information on our pension and postretirement plans, including plan assumptions, investment strategy and asset allocation, projected benefit payments, and valuation methodologies used for assets measured at fair value, see Note 22 (Employee Benefits and Other Expenses) in our 2018 Form 10-K.

Table 19.1 presents the components of net periodic benefit cost.

Table 19.1: Net Periodic Benefit Cost

			2019			2018
	Pension benefits			Pension benefits		
(in millions)	Qualified	Non-qualified	Other benefits	Qualified	Non-qualified	Other benefits
Quarter ended June 30,						
Service cost	$ 3	—	—	2	—	—
Interest cost (1)	104	5	6	98	6	5
Expected return on plan assets (1)	(142)	—	(7)	(161)	—	(8)
Amortization of net actuarial loss (gain) (1)	37	3	(4)	33	3	(5)
Amortization of prior service credit (1)	—	—	(3)	—	—	(2)
Settlement loss (1)	—	—	—	—	—	—
Net periodic benefit cost (income)	$ 2	8	(8)	(28)	9	(10)
Six months ended June 30,						
Service cost	$ 6	—	—	3	—	—
Interest cost (1)	209	11	11	196	11	10
Expected return on plan assets (1)	(284)	—	(14)	(321)	—	(15)
Amortization of net actuarial loss (gain) (1)	74	5	(8)	66	6	(9)
Amortization of prior service credit (1)	—	—	(5)	—	—	(5)
Settlement loss (1)	—	2	—	—	3	—
Net periodic benefit cost (income)	$ 5	18	(16)	(56)	20	(19)

(1) Balances are reported in other noninterest expense on the consolidated statement of income.

Note 20: Earnings and Dividends Per Common Share

Table 20.1 shows earnings per common share and diluted earnings per common share and reconciles the numerator and denominator of both earnings per common share calculations.

Table 20.1: Earnings Per Common Share Calculations

	Quarter ended June 30,		Six months ended June 30,	
(in millions, except per share amounts)	**2019**	2018	**2019**	2018
Wells Fargo net income	$ **6,206**	5,186	$ **12,066**	10,322
Less: Preferred stock dividends and other	**358**	394	**711**	797
Wells Fargo net income applicable to common stock (numerator)	$ **5,848**	4,792	$ **11,355**	9,525
Earnings per common share				
Average common shares outstanding (denominator)	**4,469.4**	4,865.8	**4,510.2**	4,875.7
Per share	$ **1.31**	0.98	$ **2.52**	1.95
Diluted earnings per common share				
Average common shares outstanding	**4,469.4**	4,865.8	**4,510.2**	4,875.7
Add: Stock options (1)	**0.1**	8.2	**1.4**	9.0
Restricted share rights (1)	**25.5**	20.7	**28.5**	25.4
Warrants (1)	**—**	5.1	**—**	6.0
Diluted average common shares outstanding (denominator)	**4,495.0**	4,899.8	**4,540.1**	4,916.1
Per share	$ **1.30**	0.98	$ **2.50**	1.94

(1) Calculated using the treasury stock method.

Table 20.2 presents the outstanding Series L convertible preferred stock and options to purchase shares of common stock that were anti-dilutive and therefore not included in the calculation of diluted earnings per common share.

Table 20.2: Outstanding Anti-Dilutive Securities

	Weighted-average shares			
	Quarter ended June 30,		Six months ended June 30,	
(in millions)	**2019**	2018	**2019**	2018
Series L Convertible Preferred Stock (1)	**25.3**	25.3	**25.3**	25.3
Stock options (2)	**—**	—	**—**	0.5

(1) Calculated using the if-converted method.
(2) Calculated using the treasury stock method.

Table 20.3 presents dividends declared per common share.

Table 20.3: Dividends Declared Per Common Share

	Quarter ended June 30,		Six months ended June 30,	
	2019	2018	**2019**	2018
Per common share	$ **0.450**	0.390	**0.900**	0.780

Note 21: Other Comprehensive Income

Table 21.1 provides the components of OCI, reclassifications to net income by income statement line item, and the related tax effects.

Table 21.1: Summary of Other Comprehensive Income

	Quarter ended June 30,						Six months ended June 30,					
	2019			2018			**2019**			2018		
(in millions)	**Before tax**	**Tax effect**	**Net of tax**	Before tax	Tax effect	Net of tax	**Before tax**	**Tax effect**	**Net of tax**	Before tax	Tax effect	Net of tax
Debt securities:												
Net unrealized gains (losses) arising during the period	**$ 1,709**	**(422)**	**1,287**	(617)	152	(465)	**4,540**	**(1,117)**	**3,423**	(4,060)	1,000	(3,060)
Reclassification of net (gains) losses to net income:												
Interest income on debt securities (1)	**61**	**(15)**	**46**	90	(22)	68	**106**	**(26)**	**80**	159	(39)	120
Net gains on debt securities	**(20)**	**5**	**(15)**	(41)	10	(31)	**(145)**	**36**	**(109)**	(42)	10	(32)
Other noninterest income	**(2)**	**1**	**(1)**	—	—	—	**(3)**	**1**	**(2)**	—	—	—
Subtotal reclassifications to net income	**39**	**(9)**	**30**	49	(12)	37	**(42)**	**11**	**(31)**	117	(29)	88
Net change	**1,748**	**(431)**	**1,317**	(568)	140	(428)	**4,498**	**(1,106)**	**3,392**	(3,943)	971	(2,972)
Derivative and hedging activities:												
Fair Value Hedges:												
Change in fair value of excluded components on fair value hedges (2)	**56**	**(14)**	**42**	(150)	37	(113)	**30**	**(7)**	**23**	(126)	31	(95)
Cash Flow Hedges:												
Net unrealized gains (losses) arising during the period on cash flow hedges	**1**	**—**	**1**	—	—	—	**(8)**	**2**	**(6)**	(266)	66	(200)
Reclassification of net losses to net income on cash flow hedges:												
Interest income on loans	**77**	**(19)**	**58**	77	(19)	58	**155**	**(38)**	**117**	137	(34)	103
Interest expense on long-term debt	**2**	**(1)**	**1**	—	—	—	**3**	**(1)**	**2**	—	—	—
Subtotal reclassifications to net income	**79**	**(20)**	**59**	77	(19)	58	**158**	**(39)**	**119**	137	(34)	103
Net change	**136**	**(34)**	**102**	(73)	18	(55)	**180**	**(44)**	**136**	(255)	63	(192)
Defined benefit plans adjustments:												
Net actuarial and prior service gains (losses) arising during the period	**—**	**—**	**—**	—	—	—	**(4)**	**1**	**(3)**	6	(2)	4
Reclassification of amounts to non interest expense (3):												
Amortization of net actuarial loss	**36**	**(9)**	**27**	31	(7)	24	**71**	**(17)**	**54**	63	(15)	48
Settlements and other	**(3)**	**2**	**(1)**	(2)	—	(2)	**(3)**	**2**	**(1)**	(2)	1	(1)
Subtotal reclassifications to non interest expense	**33**	**(7)**	**26**	29	(7)	22	**68**	**(15)**	**53**	61	(14)	47
Net change	**33**	**(7)**	**26**	29	(7)	22	**64**	**(14)**	**50**	67	(16)	51
Foreign currency translation adjustments:												
Net unrealized gains (losses) arising during the period	**14**	**(1)**	**13**	(83)	3	(80)	**56**	**(3)**	**53**	(85)	(2)	(87)
Net change	**14**	**(1)**	**13**	(83)	3	(80)	**56**	**(3)**	**53**	(85)	(2)	(87)
Other comprehensive income (loss)	**$ 1,931**	**(473)**	**1,458**	(695)	154	(541)	**4,798**	**(1,167)**	**3,631**	(4,216)	1,016	(3,200)
Less: Other comprehensive loss from noncontrolling interests, net of tax			**—**			(1)			**—**			(1)
Wells Fargo other comprehensive income (loss), net of tax			**$ 1,458**			(540)			**3,631**			(3,199)

(1) Represents net unrealized gains and losses amortized over the remaining lives of securities that were transferred from the available-for-sale portfolio to the held-to-maturity portfolio.
(2) Represents changes in fair value of cross-currency swaps attributable to changes in cross-currency basis spreads, which are excluded from the assessment of effectiveness recorded in other comprehensive income.
(3) These items are included in the computation of net periodic benefit cost (see Note 19 (Employee Benefits) for more information).

Table 21.2: Cumulative OCI Balances

(in millions)		Debt securities	Derivative and hedging activities	Defined benefit plans adjustments	Foreign currency translation adjustments	Cumulative other compre-hensive income
Quarter ended June 30, 2019						
Balance, beginning of period	**$**	**(566)**	**(651)**	**(2,272)**	**(193)**	**(3,682)**
Net unrealized gains arising during the period		**1,287**	**43**	**—**	**13**	**1,343**
Amounts reclassified from accumulated other comprehensive income		**30**	**59**	**26**	**—**	**115**
Net change		**1,317**	**102**	**26**	**13**	**1,458**
Less: Other comprehensive income from noncontrolling interests		**—**	**—**	**—**	**—**	**—**
Balance, end of period	**$**	**751**	**(549)**	**(2,246)**	**(180)**	**(2,224)**
Quarter ended June 30, 2018						
Balance, beginning of period	$	(2,491)	(555)	(1,779)	(96)	(4,921)
Net unrealized losses arising during the period		(465)	(113)	—	(80)	(658)
Amounts reclassified from accumulated other comprehensive income		37	58	22	—	117
Net change		(428)	(55)	22	(80)	(541)
Less: Other comprehensive loss from noncontrolling interests		—	—	—	(1)	(1)
Balance, end of period	$	(2,919)	(610)	(1,757)	(175)	(5,461)
Six months ended June 30, 2019						
Balance, beginning of period	**$**	**(3,122)**	**(685)**	**(2,296)**	**(233)**	**(6,336)**
Transition adjustment (1)		**481**	**—**	**—**	**—**	**481**
Balance, January 1, 2019		**(2,641)**	**(685)**	**(2,296)**	**(233)**	**(5,855)**
Net unrealized gains (losses) arising during the period		**3,423**	**17**	**(3)**	**53**	**3,490**
Amounts reclassified from accumulated other comprehensive income		**(31)**	**119**	**53**	**—**	**141**
Net change		**3,392**	**136**	**50**	**53**	**3,631**
Less: Other comprehensive income from noncontrolling interests		**—**	**—**	**—**	**—**	**—**
Balance, end of period	**$**	**751**	**(549)**	**(2,246)**	**(180)**	**(2,224)**
Six months ended June 30, 2018						
Balance, beginning of period	$	171	(418)	(1,808)	(89)	(2,144)
Transition adjustment (2)		(118)	—	—	—	(118)
Balance, January 1, 2018		53	(418)	(1,808)	(89)	(2,262)
Net unrealized gains (losses) arising during the period		(3,060)	(295)	4	(87)	(3,438)
Amounts reclassified from accumulated other comprehensive income		88	103	47	—	238
Net change		(2,972)	(192)	51	(87)	(3,200)
Less: Other comprehensive loss from noncontrolling interests		—	—	—	(1)	(1)
Balance, end of period	$	(2,919)	(610)	(1,757)	(175)	(5,461)

(1) The transition adjustment relates to the adoption of ASU 2017-08 – Receivables – Nonrefundable Fees and Other Costs (Subtopic 310-20): *Premium Amortization on Purchased Callable Debt Securities*. See Note 1 (Summary of Significant Accounting Policies) for more information.

(2) The transition adjustment relates to the adoption of ASU 2016-01 – Financial Instruments – Overall (Subtopic 825-10): *Recognition and Measurement of Financial Assets and Financial Liabilities*. See Note 1 (Summary of Significant Accounting Policies) for more information.

Note 22: Operating Segments

We have three reportable operating segments: Community Banking; Wholesale Banking; and Wealth and Investment Management (WIM). We define our operating segments by product type and customer segment and their results are based on our management accounting process, for which there is no comprehensive, authoritative guidance equivalent to GAAP for financial accounting. The management accounting process measures the performance of the operating segments based on our management structure and is not necessarily comparable with similar information for other financial services companies. If the management structure and/or the allocation process changes, allocations, transfers and assignments may change. For a description of our operating segments see Note 26 (Operating Segments) in our 2018 Form 10-K. Table 22.1 presents our results by operating segment.

Table 22.1: Operating Segments

	Community Banking		Wholesale Banking		Wealth and Investment Management		Other (1)		Consolidated Company	
(income/expense in millions, average balances in billions)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Quarter ended June 30,										
Net interest income (2)	$ **7,066**	7,346	**4,535**	4,693	**1,037**	1,111	**(543)**	(609)	**12,095**	12,541
Provision (reversal of provision) for credit losses	**479**	484	**28**	(36)	**(1)**	(2)	**(3)**	6	**503**	452
Noninterest income	**4,739**	4,460	**2,530**	2,504	**3,013**	2,840	**(793)**	(792)	**9,489**	9,012
Noninterest expense	**7,212**	7,290	**3,882**	4,219	**3,246**	3,361	**(891)**	(888)	**13,449**	13,982
Income (loss) before income tax expense (benefit)	**4,114**	4,032	**3,155**	3,014	**805**	592	**(442)**	(519)	**7,632**	7,119
Income tax expense (benefit)	**838**	1,413	**365**	379	**201**	147	**(110)**	(129)	**1,294**	1,810
Net income (loss) before noncontrolling interests	**3,276**	2,619	**2,790**	2,635	**604**	445	**(332)**	(390)	**6,338**	5,309
Less: Net income from noncontrolling interests	**129**	123	**1**	—	**2**	—	**—**	—	**132**	123
Net income (loss) (3)	$ **3,147**	2,496	**2,789**	2,635	**602**	445	**(332)**	(390)	**6,206**	5,186
Average loans	$ **457.7**	463.8	**474.0**	464.7	**75.0**	74.7	**(59.2)**	(59.1)	**947.5**	944.1
Average assets	**1,024.8**	1,034.3	**852.2**	826.4	**83.8**	84.0	**(60.2)**	(59.8)	**1,900.6**	1,884.9
Average deposits	**777.6**	760.6	**410.4**	414.0	**143.5**	167.1	**(62.5)**	(70.4)	**1,269.0**	1,271.3
Six months ended June 30,										
Net interest income (2)	$ **14,314**	14,541	**9,069**	9,225	**2,138**	2,223	**(1,115)**	(1,210)	**24,406**	24,779
Provision (reversal of provision) for credit losses	**1,189**	702	**162**	(56)	**3**	(8)	**(6)**	5	**1,348**	643
Noninterest income	**9,241**	9,095	**5,107**	5,251	**5,991**	5,970	**(1,552)**	(1,608)	**18,787**	18,708
Noninterest expense	**14,901**	15,992	**7,720**	8,197	**6,549**	6,651	**(1,805)**	(1,816)	**27,365**	29,024
Income (loss) before income tax expense (benefit)	**7,465**	6,942	**6,294**	6,335	**1,577**	1,550	**(856)**	(1,007)	**14,480**	13,820
Income tax expense (benefit)	**1,262**	2,222	**734**	827	**393**	386	**(214)**	(251)	**2,175**	3,184
Net income (loss) before noncontrolling interests	**6,203**	4,720	**5,560**	5,508	**1,184**	1,164	**(642)**	(756)	**12,305**	10,636
Less: Net income (loss) from noncontrolling interests	**233**	311	**1**	(2)	**5**	5	**—**	—	**239**	314
Net income (loss) (3)	$ **5,970**	4,409	**5,559**	5,510	**1,179**	1,159	**(642)**	(756)	**12,066**	10,322
Average loans	$ **457.9**	467.1	**475.2**	464.9	**74.7**	74.3	**(59.1)**	(58.8)	**948.7**	947.5
Average assets	**1,020.1**	1,048.0	**848.4**	827.8	**83.5**	84.1	**(60.1)**	(59.6)	**1,891.9**	1,900.3
Average deposits	**771.6**	754.1	**410.1**	429.9	**148.3**	172.5	**(64.5)**	(72.3)	**1,265.5**	1,284.2

(1) Includes the elimination of certain items that are included in more than one business segment, substantially all of which represents products and services for Wealth and Investment Management customers served through Community Banking distribution channels.
(2) Net interest income is the difference between interest earned on assets and the cost of liabilities to fund those assets. Interest earned includes actual interest earned on segment assets as well as interest credits for any funding of a segment available to be provided to other segments. The cost of liabilities includes actual interest expense on segment liabilities as well as funding charges for any funding provided from other segments.
(3) Represents segment net income (loss) for Community Banking; Wholesale Banking; and Wealth and Investment Management segments and Wells Fargo net income for the consolidated company.

Note 23: Regulatory and Agency Capital Requirements

The Company and each of its subsidiary banks are subject to regulatory capital adequacy requirements promulgated by federal bank regulatory agencies. The Federal Reserve establishes capital requirements for the consolidated financial holding company, and the OCC has similar requirements for the Company's national banks, including Wells Fargo Bank, N.A. (the Bank).

Table 23.1 presents regulatory capital information for Wells Fargo & Company and the Bank using Basel III, which increased minimum required capital ratios, and introduced a minimum Common Equity Tier 1 (CET1) ratio. We must report the lower of our CET1, tier 1 and total capital ratios calculated under the Standardized Approach and under the Advanced Approach in the assessment of our capital adequacy. The Standardized Approach applies assigned risk weights to broad risk categories, while the calculation of risk-weighted assets (RWAs) under the Advanced Approach differs by requiring applicable banks to utilize a risk-sensitive methodology, which relies upon the use of internal credit models, and includes an operational risk component. The Basel III capital rules are being phased-in effective January 1, 2014, through the end of 2021. Beginning January 1, 2018, the requirements for calculating CET1 and tier 1 capital, along with RWAs, became fully phased-in. Accordingly, the information presented reflects fully phased-in CET1 capital, tier 1 capital, and RWAs, but reflects total capital still in accordance with Transition Requirements.

The Bank is an approved seller/servicer of mortgage loans and is required to maintain minimum levels of shareholders' equity, as specified by various agencies, including the United States Department of Housing and Urban Development, GNMA, FHLMC and FNMA. At June 30, 2019, the Bank met these requirements. Other subsidiaries, including the Company's insurance and broker-dealer subsidiaries, are also subject to various minimum capital levels, as defined by applicable industry regulations. The minimum capital levels for these subsidiaries, and related restrictions, are not significant to our consolidated operations.

Table 23.1: Regulatory Capital Information

	Wells Fargo & Company				Wells Fargo Bank, N.A.			
	June 30, 2019		December 31, 2018		**June 30, 2019**		December 31, 2018	
(in millions, except ratios)	Advanced Approach	Standardized Approach	Advanced Approach	Standardized Approach	Advanced Approach	Standardized Approach	Advanced Approach	Standardized Approach
Regulatory capital:								
Common equity tier 1	$ **149,183**	**149,183**	146,363	146,363	**146,505**	**146,505**	142,685	142,685
Tier 1	**170,675**	**170,675**	167,866	167,866	**146,505**	**146,505**	142,685	142,685
Total	**200,810**	**208,817**	198,798	207,041	**159,090**	**166,648**	155,558	163,380
Assets:								
Risk-weighted assets	$ **1,182,838**	**1,246,683**	1,177,350	1,247,210	**1,059,642**	**1,144,959**	1,058,653	1,154,182
Adjusted average assets (1)	**1,871,806**	**1,871,806**	1,850,299	1,850,299	**1,654,994**	**1,654,994**	1,652,009	1,652,009
Regulatory capital ratios:								
Common equity tier 1 capital	**12.61%**	**11.97** *	12.43	11.74 *	**13.83**	**12.80** *	13.48	12.36 *
Tier 1 capital	**14.43**	**13.69** *	14.26	13.46 *	**13.83**	**12.80** *	13.48	12.36 *
Total capital	**16.98**	**16.75** *	16.89	16.60 *	**15.01**	**14.56** *	14.69	14.16 *
Tier 1 leverage (1)	**9.12**	**9.12**	9.07	9.07	**8.85**	**8.85**	8.64	8.64

	Wells Fargo & Company		**Wells Fargo Bank, N.A.**	
	June 30, 2019	December 31, 2018	**June 30, 2019**	December 31, 2018
Supplementary leverage: (2)				
Total leverage exposure	$ **2,202,607**	2,174,564	**1,964,107**	1,957,276
Supplementary leverage ratio	**7.75%**	7.72	**7.46**	7.29

*Denotes the lowest capital ratio as determined under the Advanced and Standardized Approaches.

(1) The leverage ratio consists of Tier 1 capital divided by total average assets, excluding goodwill and certain other items.

(2) The supplementary leverage ratio consists of Tier 1 capital divided by total leverage exposure. Total leverage exposure consists of total average assets, less goodwill and other permitted Tier 1 capital deductions (net of deferred tax liabilities), plus certain off-balance sheet exposures.

Table 23.2 presents the minimum required regulatory capital ratios under Transition Requirements to which the Company and the Bank were subject as of June 30, 2019, and December 31, 2018.

Table 23.2: Minimum Required Regulatory Capital Ratios – Transition Requirements (1)

	Wells Fargo & Company		Wells Fargo Bank, N.A.	
	June 30, 2019	December 31, 2018	**June 30, 2019**	December 31, 2018
Regulatory capital ratios:				
Common equity tier 1 capital	**9.000%**	7.875	**7.000**	6.375
Tier 1 capital	**10.500**	9.375	**8.500**	7.875
Total capital	**12.500**	11.375	**10.500**	9.875
Tier 1 leverage	**4.000**	4.000	**4.000**	4.000
Supplementary leverage	**5.000**	5.000	**6.000**	6.000

(1) At June 30, 2019, under transition requirements, the CET1, tier 1 and total capital minimum ratio requirements for Wells Fargo & Company include a capital conservation buffer of 2.500% and a global systemically important bank (G-SIB) surcharge of 2.000%. Only the 2.500% capital conservation buffer applies to the Bank at June 30, 2019.

Glossary of Acronyms

ACL	Allowance for credit losses	**HQLA**	High-quality liquid assets
ALCO	Asset/Liability Management Committee	**HTM**	Held to maturity
ARM	Adjustable-rate mortgage	**LCR**	Liquidity coverage ratio
ASC	Accounting Standards Codification	**LHFS**	Loans held for sale
ASU	Accounting Standards Update	**LIBOR**	London Interbank Offered Rate
AUA	Assets under administration	**LIHTC**	Low income housing tax credit
AUM	Assets under management	**LOCOM**	Lower of cost or fair value
AVM	Automated valuation model	**LTV**	Loan-to-value
BCBS	Basel Committee on Bank Supervision	**MBS**	Mortgage-backed security
BHC	Bank holding company	**MLHFS**	Mortgage loans held for sale
CCAR	Comprehensive Capital Analysis and Review	**MSR**	Mortgage servicing right
CD	Certificate of deposit	**NAV**	Net asset value
CDO	Collateralized debt obligation	**NPA**	Nonperforming asset
CDS	Credit default swaps	**OCC**	Office of the Comptroller of the Currency
CECL	Current expected credit loss	**OCI**	Other comprehensive income
CET1	Common Equity Tier 1	**OTC**	Over-the-counter
CFPB	Consumer Financial Protection Bureau	**OTTI**	Other-than-temporary impairment
CLO	Collateralized loan obligation	**PCI Loans**	Purchased credit-impaired loans
CLTV	Combined loan-to-value	**PTPP**	Pre-tax pre-provision profit
CPI	Collateral protection insurance	**RBC**	Risk-based capital
CPP	Capital Purchase Program	**RMBS**	Residential mortgage-backed securities
CRE	Commercial real estate	**ROA**	Wells Fargo net income to average total assets
DPD	Days past due	**ROE**	Wells Fargo net income applicable to common stock
ESOP	Employee Stock Ownership Plan		to average Wells Fargo common stockholders' equity
FAS	Statement of Financial Accounting Standards	**ROTCE**	Return on average tangible common equity
FASB	Financial Accounting Standards Board	**RWAs**	Risk-weighted assets
FDIC	Federal Deposit Insurance Corporation	**SEC**	Securities and Exchange Commission
FHA	Federal Housing Administration	**S&P**	Standard & Poor's Global Ratings
FHLB	Federal Home Loan Bank	**SLR**	Supplementary leverage ratio
FHLMC	Federal Home Loan Mortgage Corporation	**SOFR**	Secured Overnight Financing Rate
FICO	Fair Isaac Corporation (credit rating)	**SPE**	Special purpose entity
FNMA	Federal National Mortgage Association	**TDR**	Troubled debt restructuring
FRB	Board of Governors of the Federal Reserve System	**TLAC**	Total Loss Absorbing Capacity
GAAP	Generally accepted accounting principles	**VA**	Department of Veterans Affairs
GNMA	Government National Mortgage Association	**VaR**	Value-at-Risk
GSE	Government-sponsored entity	**VIE**	Variable interest entity
G-SIB	Globally systemic important bank	**WIM**	Wealth and Investment Management

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

Information in response to this item can be found in Note 14 (Legal Actions) to Financial Statements in this Report which information is incorporated by reference into this item.

Item 1A. Risk Factors

Information in response to this item can be found under the "Financial Review – Risk Factors" section in this Report which information is incorporated by reference into this item.

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

The following table shows Company repurchases of its common stock for each calendar month in the quarter ended June 30, 2019.

Calendar month	Total number of shares repurchased (1)	Weighted-average price paid per share	Maximum number of shares that may yet be repurchased under the authorization
April	28,673,471	$ 47.86	269,297,234
May	41,151,107	46.79	228,146,127
June	35,028,166	45.68	193,117,961
Total	104,852,744		

(1) All shares were repurchased under an authorization covering up to 350 million shares of common stock approved by the Board of Directors and publicly announced by the Company on October 23, 2018. In addition, the Company publicly announced on July 23, 2019, that the Board of Directors authorized the repurchase of an additional 350 million shares of common stock. Unless modified or revoked by the Board, these authorizations do not expire.

Item 6. Exhibits

A list of exhibits to this Form 10-Q is set forth below.

The Company's SEC file number is 001-2979. On and before November 2, 1998, the Company filed documents with the SEC under the name Norwest Corporation. The former Wells Fargo & Company filed documents under SEC file number 001-6214.

Exhibit Number	Description	Location
3(a)	Restated Certificate of Incorporation, as amended and in effect on the date hereof.	Incorporated by reference to Exhibit 3(a) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.
3(b)	By-Laws.	Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed March 1, 2018.
4(a)	See Exhibits 3(a) and 3(b).	
4(b)	The Company agrees to furnish upon request to the Commission a copy of each instrument defining the rights of holders of senior and subordinated debt of the Company.	
10(a)	Long-Term Incentive Compensation Plan (as amended and restated on April 23, 2019)	Incorporated by reference to Exhibit 10(b) to the Company's Current Report on Form 8-K filed April 26, 2019.
	Form of Restricted Share Rights Award Agreement:	
	For grants on or after April 7, 2019.	Filed herewith.
31(a)	Certification of principal executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith.
31(b)	Certification of principal financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith.
32(a)	Certification of Periodic Financial Report by Chief Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and 18 U.S.C. § 1350.	Furnished herewith.
32(b)	Certification of Periodic Financial Report by Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and 18 U.S.C. § 1350.	Furnished herewith.
101.INS	Inline XBRL Instance Document	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document	Filed herewith.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	Filed herewith.
101.DEF	Inline XBRL Taxonomy Extension Definitions Linkbase Document	Filed herewith.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	Filed herewith.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	Filed herewith.

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.

Dated: August 2, 2019		WELLS FARGO & COMPANY
	By:	/s/ RICHARD D. LEVY
		Richard D. Levy
		Executive Vice President and Controller
		(Principal Accounting Officer)

Exhibit 10(a)

Form of Restricted Share Rights Award Agreement for Grants on or after April 7, 2019

Brackets identify provisions that may vary depending on the particular grant, grant recipient and/or other relevant factor.

WELLS FARGO & COMPANY
LONG-TERM INCENTIVE COMPENSATION PLAN
RESTRICTED SHARE RIGHTS AWARD AGREEMENT

Grant Date: *[applicable date]*

1. **Award.** To encourage your continued employment with the Company or any Affiliate and to motivate you to help the Company increase stockholder value over the long term, Wells Fargo & Company (the "Company") has awarded you the number of Restricted Share Rights as set forth on the acknowledgement screen for your grant on this website (the "Award"). Each Restricted Share Right entitles you to receive one share of Wells Fargo & Company common stock ("Common Stock") contingent upon vesting and subject to the other terms and conditions set forth in the Company's Long-Term Incentive Compensation Plan, as may be amended from time to time (the "Plan") and this Award Agreement.

2. **Vesting.** Except as otherwise provided in this Award Agreement, and subject to the Company's right to recoup or forfeit all or any portion of this Award and other conditions as provided in this Award Agreement[, including but not limited to the performance conditions in *[applicable paragraphs]* below], the Restricted Share Rights will vest and be settled according to the following schedule:

   [Vesting Schedule]

   Shares of Common Stock in settlement of the Restricted Share Rights will be issued to you or, in case of your death, your Beneficiary determined in accordance with the Plan. Although you may receive dividend equivalents as provided below, you will have no rights as a stockholder of the Company with respect to your Restricted Share Rights until settlement. Upon vesting, each Restricted Share Right will be settled and distributed as one share of Common Stock except as otherwise provided in the Plan or this Award Agreement.

3. **Termination.**

   (a) If you cease to be an Employee due to your death, any then unvested Restricted Share Right awarded hereby (including any Restricted Share Right granted with respect to dividend equivalents as provided below) will immediately vest upon your date of death and will be settled and distributed to your Beneficiary in shares of Common Stock between January 2 and March 1 of the year following the year in which you die. Notwithstanding the foregoing, if by the last date set forth herein your Beneficiary has not presented evidence deemed satisfactory by the Company to allow transfer of the shares of Common Stock to the Beneficiary under applicable laws, the Company may treat all unvested Restricted Share Rights as forfeited, in which case the Company shall have no obligation to issue shares of Common Stock or benefits in lieu of such shares to your Beneficiary and shall have no liability therefor.

   (b) If you incur an involuntary [Separation from Service][termination of employment] as a result of [one of] the [following:]

   [(1)] application of the Company's Extended Absence Policy to you in connection with a Disability,

   (2) [your displacement and receipt of an immediate lump sum severance benefit, placement on a Salary Continuation Leave of Absence or placement on another leave of absence which will result in your receipt of a severance benefit in connection with that leave, or][the termination without Cause of your status as an employee by the Company or an Affiliate, or]

   (3) [the Company or an Affiliate entering into a corporate transaction with another company (the "buyer") (including a transaction where the buyer acquires all or any portion of the assets, stock or operations of the Company or Affiliate) and pursuant to the terms of the transaction your continuing in employment with the buyer after completion of the corporate transaction,]

   any then unvested Restricted Share Right awarded hereby (including any Restricted Share Right granted with respect to dividend equivalents as provided below) will [immediately vest][vest on a pro rata basis for the number of whole months elapsed since the Grant Date in which you were continuously employed by the Company or an Affiliate, over the *[vesting period]* of the Award]*[alterative vesting approach]*, and will be settled and distributed to you in shares of Common Stock within 90 days from your [Separation from Service][termination of employment or, if earlier, by March 1 of the year following year in which the Restricted Share Rights vest][, subject to the performance conditions in *[applicable paragraphs]* below.

   [The definitions of the terms ["Cause"]["Separation from Service" (which is determined by the Company in accordance with Section 409A (as defined in paragraph 11 below))] and "Disability" are set forth on Exhibit A to this Award Agreement, which definitions are incorporated by reference herein.] [For purposes of this Award, you will be considered to have a "Disability" if you are (1) receiving income replacement benefits for a period of not less than three months under the Company's or an Affiliate's long-term disability plan as a result of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for continuous period of not less than 12 months; or (2) determined by the Social Security Administration to be eligible for social security disability benefits.]

(c) [If you have a Separation from Service that is not addressed in paragraph 3(b) above for a reason other than Cause and you satisfy the definition of Retirement under the Plan on your Separation from Service date or you satisfy the definition of Retirement following your Separation from Service date at the end of an approved leave of absence not to exceed six months, any then unvested Restricted Share Right awarded hereby (including any Restricted Share Right granted with respect to dividend equivalents as provided below) will continue to vest and be settled upon the scheduled vesting date as set forth in paragraph 2 above[, subject to the conditions and restrictions in *[applicable paragraphs]* below]; provided, however, if you die following Retirement, subject to the limitations set forth in paragraph 3(a), any then unvested Restricted Share Right will vest immediately upon your date of death and will be settled and distributed to your Beneficiary in shares of Common Stock between January 2 and March 1 of the year following the year in which you die. The definition of the term "Cause" is set forth on Exhibit A to this Award Agreement, which definition is incorporated by reference herein.]

(d) [If the Affiliate that employs you incurs a Change in Control and you continue employment with the buyer immediately after the Change in Control, any then unvested Restricted Share Right awarded hereby (including any Restricted Share Right granted with respect to dividend equivalents as provided below) will immediately vest and will be settled and distributed to you in shares of Common Stock within 90 days from the date the Change in Control occurred[or, if earlier, by March 1 of the year immediately following the year in which the Change in Control occurred][, subject to the conditions and restrictions in *[applicable paragraphs]* below]. Exhibit A to this Award Agreement sets forth the definition of the term "Change in Control," which definition is incorporated in this Award Agreement by reference.]

[Alternative Vesting upon Separation from Service/Termination of Employment]

If you [incur a Separation from Service][terminate employment] other than for a reason described in *[applicable paragraphs]* above, any then unvested Restricted Share Right awarded hereby (including any Restricted Share Right granted with respect to dividend equivalents as provided below) will immediately terminate without notice to you and will be forfeited.

4. **Dividend Equivalents.** During the period beginning on the Grant Date and ending on the date the applicable Restricted Share Rights vest and are distributed, or are forfeited, whichever occurs first, if the Company pays a dividend on the Common Stock, you will automatically receive, as of the payment date for such dividend, dividend equivalents in the form of additional Restricted Share Rights based on the amount or number of shares that would have been paid on the Restricted Share Rights had they been issued and outstanding shares of Common Stock as of the record date and, if a cash dividend, the closing price of the Common Stock on the New York Stock Exchange as of the dividend payment date. You will also automatically receive dividend equivalents with respect to such additional Restricted Share Rights, to be granted in the same manner. Restricted Share Rights granted with respect to dividend equivalents will be subject to the same vesting schedule and other terms and conditions as the underlying Restricted Share Rights, including the Company's right of recoupment or forfeiture, and will be distributed in shares of Common Stock when, and if, the underlying Restricted Share Rights are settled and distributed.

5. **Tax Withholding.** Regardless of any action the Company or an Affiliate which is your employer (the "Employer") takes with respect to any or all income tax, payroll tax, payment on account or other tax-related items related to your participation in the Plan and legally applicable to you or deemed by the Company or the Employer to be an appropriate charge to you even if technically due by the Company or the Employer ("Tax-Related Items"), you acknowledge that the ultimate liability for all Tax-Related Items is and remains your responsibility and may exceed the amount actually withheld by the Company or the Employer. You further acknowledge that the Company and/or the Employer: (a) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Award, including the grant, vesting or settlement of the Restricted Share Rights, the issuance of shares of Common Stock upon settlement of the Restricted Share Rights, the subsequent sale of shares of Common Stock acquired pursuant to such issuance and the receipt of any dividends and/or any dividend equivalents; and (b) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Award to reduce or eliminate your liability for such Tax-Related Items or to achieve any particular tax result. Further, if you are subject to tax on the Award in more than one jurisdiction at the time of any relevant taxable event, you acknowledge that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

   Prior to any relevant taxable or tax withholding event, as applicable, you shall pay or make adequate arrangements satisfactory to the Company or the Employer to satisfy all Tax-Related Items. In this regard, you authorize the Company and/or the Employer, or their respective agents, at their discretion and pursuant to such procedures as the Company may specify from time to time, to satisfy the obligations with regard to all Tax-Related Items by one or a combination of the following: (1) withholding from any wages or other cash compensation paid to you by the Company and/or the Employer; (2) withholding from proceeds of the sale of shares of Common Stock acquired upon vesting and settlement of the

Restricted Share Rights either through a voluntary sale or through a mandatory sale arranged by the Company (on your behalf pursuant to this authorization); or (3) withholding in shares of Common Stock to be issued upon vesting and settlement of the Restricted Share Rights. Notwithstanding the foregoing, if you are subject to the short-swing profit rules of Section 16(b) of the Securities Exchange Act of 1934 (the "Exchange Act"), the Company will withhold in shares of Common Stock upon the relevant tax withholding event[, except with respect to any Tax-Related Items required to be withheld prior to the vesting dates set forth in paragraph 2 which may be withheld from your wages or other cash compensation], unless such withholding method is prevented by applicable law or has materially adverse accounting or tax consequences, in which case the Tax-Related Items withholding obligation may be satisfied by one or a combination of methods (1) and (2) above.

Depending on the withholding method, the Company may withhold or account for Tax-Related Items by considering applicable minimum statutory withholding amounts or other applicable withholding rates, including maximum applicable rates, in which case you will receive a refund of any over-withheld amount in cash and will have no entitlement to the Common Stock equivalent. Anything to the contrary in this paragraph 5 notwithstanding, the Company or the Employer's right to withhold any amounts payable pursuant to this Award to cover Tax-Related Items for any portion of the Award that is considered deferred compensation subject to Section 409A shall be limited to the minimum amount permitted to avoid a prohibited acceleration under Section 409A. If the obligation for Tax-Related Items is satisfied by withholding in shares of Common Stock, for tax purposes, you will be deemed to have been issued the full number of shares of Common Stock subject to the vested Restricted Share Rights, notwithstanding that a number of the shares of Common Stock are held back solely for the purpose of paying the Tax-Related Items due as a result of any aspect of your participation in the Plan.

Finally, you shall pay to the Company or the Employer any amount of Tax-Related Items that the Company or the Employer may be required to withhold or account for as a result of your participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the shares or the proceeds of the sale of shares of Common Stock, if you fail to comply with your obligations in connection with the Tax-Related Items.

6. **Nontransferable.** Unless the Committee provides otherwise, (i) no rights under this Award will be assignable or transferable, and neither you nor your Beneficiary will have any power to anticipate, alienate, dispose of, pledge or encumber any rights under this Award, and (ii) the rights and the benefits of this Award may be exercised and received during your lifetime only by you or your legal representative.

7. **Other Restrictions; Amendment.** The issuance of Common Stock hereunder is subject to compliance by the Company and you with all legal requirements applicable thereto, including compliance with the requirements of 12 C.F.R. Part 359, orders issued under 12 U.S.C. § 1818(b) (together with any agreements related thereto, "orders") and tax withholding obligations, and with all applicable regulations of any stock exchange on which the Common Stock may be listed at the time of issuance. For the avoidance of doubt, regulatory approval under Part 359 or any orders to which the Company is a party may be required for the issuance of Common Stock hereunder in certain circumstances, and the Company cannot provide any assurance that it will be able to request such approval in accordance with the requirements of Part 359 or the applicable order or that any requested approval will be received. Subject to paragraph[s] 11 [and 12] below, the Committee may, in its sole discretion and without your consent, reduce, delay vesting, modify, revoke, cancel, impose additional conditions and restrictions on or recover all or a portion of this Award if the Committee deems it necessary or advisable to comply with applicable laws, rules and regulations. This Award is subject to any applicable recoupment or "clawback" policies of the Company, as in effect from time to time, and any applicable recoupment or clawback requirements imposed under laws, rules and regulations.

8. **[Performance Conditions.** The Award is fully conditioned on and subject to performance adjustments, which include the right of the Committee to cause you to forfeit all or any unpaid portion of an Award, if the Committee determines in its sole discretion that:
   - You engage in misconduct which has or might reasonably be expected to have reputational or other harm to the Company or any conduct that constitutes Cause;
   - You engage in misconduct or commit a material error that causes or might reasonably be expected to cause significant financial or reputational harm to the Company or your business group;
   - The Award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy;
   - You improperly or with gross negligence, including in a supervisory capacity, fail to identify, escalate, monitor, or manage, in a timely manner and as reasonably expected, risks material to the Company or your business group; or
   - The Company or your business group suffers a material downturn in its financial performance or suffers a material failure of risk management.

For purposes of this Award, "Cause" means (1) the continued failure by you to substantially perform your duties; (2) your conviction of a crime involving dishonesty or breach of trust, conviction of a felony, or commission of any act that makes you ineligible for coverage under Wells Fargo's fidelity bond or otherwise makes you ineligible for continued employment; or (3) your violation of the Company's policies, including but not limited to Wells Fargo's Code of Ethics and Business Conduct (or the Code applicable to your line of business), Anti-Bribery and Corruption Policy, Information Security Policies, or Risk Management Accountability Policy. For the avoidance of doubt, an event or conduct constituting Cause could take place before or after your termination of employment. The Committee may consider any factors it determines necessary or appropriate for purposes of making a determination whether a performance adjustment is appropriate and the amount of the adjustment based on the particular facts and circumstances. All determinations by the Committee will be final and binding.]

9. **Restrictive Covenants.** In consideration of the terms of this Award and your access to Confidential Information, you agree to the restrictive covenants and associated remedies as set forth below, which exist independently of and in addition to any obligation to which you are subject under the terms of the Wells Fargo Agreement Regarding Trade Secrets, Confidential Information, Non-Solicitation, And Assignment Of Inventions (the "TSA"):

   (a) **Trade Secrets and Confidential Information.** During the course of your employment, you will acquire knowledge of the Company's and/or any Affiliate's (collectively "WFC") Trade Secrets and other proprietary information relating to its business, business methods, personnel, and customers (collectively, "Confidential Information"). "Trade Secrets" means WFC's confidential information, which has an economic value in being secret and which WFC has taken steps to keep secret and you understand and agree that Trade Secrets include, but are not limited to, confidentially maintained client and customer lists and information, and confidentially maintained prospective client and customer lists and information. You agree that Confidential Information of WFC is to be used solely and exclusively for the purpose of conducting business on behalf of WFC. You agree to keep such Confidential Information confidential and will not divulge, use or disclose this information except for that purpose. In addition, you agree that, both during and after your employment, you will not remove, share, disseminate or otherwise use WFC's Trade Secrets to directly or indirectly solicit, participate in or promote the solicitation of any of WFC's clients, customers, or prospective customers for the purpose of providing products or services that are in competition with WFC's products or services. Notwithstanding the foregoing, nothing contained in this Award Agreement prohibits or restricts you (or your attorney) from initiating communications directly with, or responding to any inquiry from, or providing testimony before, the Securities and Exchange Commission, the Financial Industry Regulatory Authority, the National Labor Relations Board, the Equal Employment Opportunity Commission, or any self-regulatory organization or governmental authority charged with the enforcement of any laws.

   (b) **Assignment of Inventions.** You acknowledge and agree that all inventions and all worldwide intellectual property rights that you make, conceive or first reduce to practice (alone or in conjunction with others) during your employment with WFC are owned by WFC that (1) relate at the time of conception or reduction to practice of the invention to WFC's business, or actual or demonstrably anticipated research or development of WFC whether or not you made, conceived or first reduced the inventions to practice during normal working hours; and (2) involve the use of any time, material, information, or facility of WFC.

   (c) **Non-solicitation.** If you are currently subject to a TSA, you shall continue to be bound by the terms of the TSA. If you are not currently subject to a TSA, you agree to the following:

   For a period of one year immediately following termination of your employment for any reason, you will not do any of the following, either directly or indirectly or through associates, agents, or employees:

   i. solicit, recruit or promote the solicitation or recruitment of any employee or consultant of WFC for the purpose of encouraging that employee or consultant to leave WFC's employ or sever an agreement for services; or

   ii. to the fullest extent enforceable under the applicable state law, solicit, participate in or promote the solicitation of any of WFC's clients, customers, or prospective customers with whom you had Material Contact and/or regarding whom you received Confidential Information, for the purpose of providing products or services that are in competition with WFC's products or services. "Material Contact" means interaction between you and the customer, client or prospective customer within one (1) year prior to your last day as a team member which takes place to manage, service or further the business relationship.

   The one-year limitation is not intended to limit WFC's right to prevent misappropriation of its Confidential Information beyond the one-year period.

   (d) **Violation of TSA or Restrictive Covenants.** If you breach any of the terms of a TSA and/or the restrictive covenants above, all unvested Restricted Share Rights shall be immediately and irrevocably forfeited. For any Restricted Share Rights that vested within one (1) year prior to the termination of your employment with WFC or at any time after your termination, you shall be required to repay or otherwise reimburse WFC an amount having a value equal to the aggregate fair market value (determined as of the date of vesting) of such vested shares. This paragraph does not constitute the Company's exclusive remedy for violation of your restrictive covenant obligations, and WFC may seek any additional legal or equitable remedy, including injunctive relief, for any such violation.

10. **No Employment Agreement.** Neither the award to you of the Restricted Share Rights nor the delivery to you of this Award Agreement or any other document relating to the Restricted Share Rights will confer on you the right to continued employment with the Company or any Affiliate. You understand that your employment with the Company or any Affiliate is "at will" and

nothing in this document changes, alters or modifies your "at will" status or your obligation to comply with all policies, procedures and rules of the Company, as they may be adopted or amended from time to time.

11. **Section 409A**. This Award is intended to [comply with the requirements of][be exempt from] Section 409A of the Internal Revenue Code of 1986, as amended, and the applicable Treasury Regulations or other binding guidance thereunder ("Section 409A"). Accordingly, all provisions included in this Award Agreement, or incorporated by reference, will be interpreted and administered in accordance with that intent. [Therefore, all Restricted Share Rights will be settled and distributed no later than March 1 of the year following the year when such Restricted Share Rights vest.] If any provision of the Plan or this Award Agreement would otherwise conflict with or frustrate this intent, that provision will be interpreted and deemed amended or limited so as to avoid the conflict; provided, however, that the Company makes no representation that the Award is exempt from or complies with Section 409A and makes no undertaking to preclude Section 409A from applying to the Award. The Company will have no liability to you or to any other party if the Award or payment of the Award that is intended to be [compliant with][exempt from] Section 409A is not so [compliant][exempt] or for any action taken by the Committee with respect thereto.

12. **[Six-month Delay**. Notwithstanding any provision of the Plan or this Award Agreement to the contrary, if, upon your Separation from Service for any reason, the Company determines that you are a "Specified Employee" for purposes of Section 409A and in accordance with the definition set forth on Exhibit A to this Award Agreement, which definition is incorporated by reference herein, your Restricted Share Rights, if subject to settlement upon your Separation from Service and if required pursuant to Section 409A, will not settle before the date that is the first business day following the six-month anniversary of such Separation from Service, or, if earlier, upon your death.]

13. **Stock Ownership Provision.** In accordance with the terms of the Company's stock ownership policy, as may be amended from time to time: (a) if you are an Executive Officer of the Company or a member of its Operating Committee, as a condition to receiving this Award, you agree to hold, while employed by the Company or any Affiliate and for a period of one year after your Retirement, a number of shares of Common Stock equal to at least 50% of the after-tax shares of Common Stock (assuming a 50% tax rate) acquired upon vesting and settlement of Company stock-based awards or pursuant to the exercise of Company stock options (if applicable), subject to a maximum holding requirement of shares with a value equal to ten (10) times your cash salary; and (b) if you are not an Executive Officer or member of the Operating Committee, you are expected to hold that number of shares while employed by the Company or any Affiliate.

14. **Severability and Judicial Modification.** If any provision of this Award Agreement is held to be invalid or unenforceable under pertinent state law or otherwise or the Company elects not to enforce such restriction, including but not limited to paragraph 9(c)ii, the remaining provisions shall remain in full force and effect and the invalid or unenforceable provision shall be modified only to the extent necessary to render that provision valid and enforceable to the fullest extent permitted by law. If the invalid or unenforceable provision cannot be, or is not, modified, that provision shall be severed from this Award Agreement and all other provisions shall remain valid and enforceable.

15. **Additional Provisions.** This Award Agreement is subject to the provisions of the Plan. Capitalized terms not defined in this Award Agreement are used as defined in the Plan. If the Plan and this Award Agreement are inconsistent, the provisions of the Plan will govern. Interpretations of the Plan and this Award Agreement by the Committee are binding on you and the Company.

16. **Applicable Law.** This Award Agreement and the award of Restricted Share Rights evidenced hereby will be governed by, and construed in accordance with the laws of the state of Delaware (without regard to its choice-of-law provisions), except to the extent Federal law would apply.

17. **Imposition of Other Requirements.** The Company reserves the right to impose other requirements on your participation in the Plan, on the Award and on any shares of Common Stock acquired under the Plan, to the extent the Company determines it is necessary or advisable in order to comply with applicable law or facilitate the administration of the Plan and provided the imposition of the term or condition will not result in adverse accounting expense to the Company, and to require you to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

18. **Electronic Delivery and Acceptance.** The Company is electronically delivering documents related to current or future participation in the Plan and is requesting your consent to participate in the Plan by electronic means. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through the current plan administrator's on-line system, or any other on-line system or electronic means that the Company may decide, in its sole discretion, to use in the future.

19. **Entire Agreement.** The Plan is incorporated herein by reference. The Plan and this Award Agreement [(including Exhibit A attached hereto)] constitute the entire agreement of the parties with respect to the Award and supersede in their entirety all prior proposals, undertakings and agreements, written or oral, and all other communications between you and the Company with respect to the Award.

[Insert requirement to acknowledge and accept grant terms]

[Exhibit A]

[Certain Definitions]

[Separation from Service

A Participant's "Separation from Service" occurs upon his or her death, retirement or other termination of employment or other event that qualifies as a "separation from service" under Internal Revenue Code Section 409A and the applicable regulations thereunder as in effect from time to time. The Company shall determine in each case when a Participant's Separation from Service has occurred, which determination shall be made in a manner consistent with Treasury Regulation Section 1.409A-1(h). The Company shall determine that a Separation from Service has occurred as of a certain date when the facts and circumstances indicate that the Company (or an Affiliate, if applicable) and the Participant reasonably anticipate that, after that date, the Participant will render no further services, or the Participant's level of bona fide services (either as an employee or independent contractor) will permanently decrease to a level that is 20% or less than the average level of the Participant's bona fide services (either as an employee or independent contractor) previously in effect for such Participant over the immediately preceding 36-month period (or the Participant's entire period of service, if the Participant has been providing services for less than 36 months).

The following presumptions shall also apply to all such determinations:

(1) Transfers. A Separation from Service has not occurred upon the Participant's transfer of employment from the Company to an Affiliate or vice versa, or from an Affiliate to another Affiliate.

(2) Medical leave of absence. Where the Participant has a medical leave of absence due to any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than six months, and he or she has not returned to employment with the Company or an Affiliate, a Separation from Service has occurred on the earlier of: (A) the first day on which the Participant would not be considered "disabled" under any disability policy of the Company or Affiliate under which the Participant is then receiving a benefit; or (B) the first day on which the Participant's medical leave of absence period exceeds 29 months.

(3) Military leave of absence. Where the Participant has a military leave of absence, and he or she has not returned to employment with the Company or an Affiliate, a Separation from Service has occurred on the day next following the last day on which the Participant is entitled to reemployment rights under USERRA.

(4) Salary continuation leave. A Separation from Service has occurred on the first day of the Participant's salary continuation leave taken under the Company's Salary Continuation Pay Plan.

(5) Other leaves of absence. In the event that the Participant is on a bona fide leave of absence, not otherwise described in this definition, from which he or she has not returned to employment with the Company or an Affiliate, the Participant's Separation from Service has occurred on the first day on which the Participant's leave of absence period exceeds six months or, if earlier, upon the Participant's termination of employment (provided that such termination of employment constitutes a Separation from Service in accordance with the last sentence of the first paragraph of this definition).

(6) Asset purchase transaction. If, in connection with the sale or other disposition of substantial assets (such as a division or substantially all assets of a trade or business) of the Company or an Affiliate to an unrelated buyer, the Participant becomes an employee of the buyer or an affiliate of the buyer upon the closing of or in connection with such transaction, a Separation from Service has not occurred if the Company and the buyer have specified that such transaction will not, with respect to any individual affected by such transaction who becomes an employee of the buyer or an affiliate, be considered a "separation from service" under Treasury Regulation Section 1.409A-1(h), and such specification meets the requirements of Treasury Regulation Section 1.409A-1(h)(4).]

[Specified Employee

A "Specified Employee" means an individual who at any time during the applicable identification period is:

(1) one of the top 50 most highly compensated officers in the Controlled Group with a title of Senior Vice President or above (where the "Controlled Group" includes the Company and its controlled group members); or

(2) a member of the Wells Fargo Operating Committee or the Wells Fargo Management Committee Review Group; or

(3) a "key employee" under Internal Revenue Code Section 416(i)(1)(A)(i), (ii) or (iii) (applied in accordance with the regulations thereunder and disregarding Internal Revenue Code Section 416(i)(5)).

For purposes of applying Internal Revenue Code Section 409A, the "identification period" is the 12-month period ending each December 31. Any person described in (1), (2) or (3) above during an identification period shall be treated as a Specified Employee for the entire 12-month period beginning on the following April 1.

Notwithstanding the above, in the event of a corporate transaction to which the Company or an Affiliate is a party, the Company may, in its discretion, establish a method for determining Specified Employees pursuant to Treasury Regulation Section 1.409A-1(i)(6).]

[Disability

You will be considered to have a "Disability" if you are (1) receiving income replacement benefits for a period of not less than three months under the Company's or an Affiliate's long-term disability plan as a result of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months; or (2) determined by the Social Security Administration to be eligible for social security disability benefits.]

[Cause

"Cause" means (1) the continued failure by you to substantially perform your duties; (2) your conviction of a crime involving dishonesty or breach of trust, conviction of a felony, or commission of any act that makes you ineligible for coverage under the Company's fidelity bond or otherwise makes you ineligible for continued employment; or (3) your violation of the Company's policies, including but not limited to Wells Fargo's Code of Ethics and Business Conduct (or the Code applicable to your line of business), Anti-Bribery and Corruption Policy, Information Security Policies, and Risk Management Accountability Policy. For the avoidance of doubt, an event or conduct constituting Cause could take place before or after your termination of employment.]

[Change in Control

"Change in Control" means a change in the ownership or effective control of the Company or the Affiliate that employs you, or in the ownership of a substantial portion of the assets of the Company or the Affiliate that employs you within the meaning of Treas. Reg. section 1.409A-3(i)(5) as determined by the Company.]

Exhibit 31(a)

CERTIFICATION

I, C. Allen Parker, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2019, of Wells Fargo & Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 2, 2019

/s/ C. ALLEN PARKER
C. Allen Parker
Interim Chief Executive Officer

Exhibit 31(b)

CERTIFICATION

I, John R. Shrewsberry, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2019, of Wells Fargo & Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 2, 2019

/s/ JOHN R. SHREWSBERRY
John R. Shrewsberry
Chief Financial Officer

Exhibit 32(a)

Certifications Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report on Form 10-Q of Wells Fargo & Company (the "Company") for the period ended June 30, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, C. Allen Parker, Interim Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ C. ALLEN PARKER
C. Allen Parker
Interim Chief Executive Officer
Wells Fargo & Company
August 2, 2019

Exhibit 32(b)

Certifications Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report on Form 10-Q of Wells Fargo & Company (the “Company”) for the period ended June 30, 2019, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, John R. Shrewsberry, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ JOHN R. SHREWSBERRY
John R. Shrewsberry
Chief Financial Officer
Wells Fargo & Company
August 2, 2019