Section 1: 10-K (10-K)

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended
December 31, 2019

Commission file number: 1-11302

KeyCorp

Exact name of registrant as specified in its charter:

Ohio	**34-6542451**
State or other jurisdiction of incorporation or organization:	**I.R.S. Employer Identification Number:**
127 Public Square, Cleveland, Ohio	**44114-1306**
Address of principal executive offices:	**Zip Code:**

(216) 689-3000
Registrant's telephone number, including area code:

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares, $1 par value	KEY	New York Stock Exchange
Depositary Shares (each representing a 1/40th interest in a share of Fixed-to-Floating Rate Perpetual Non-Cumulative Preferred Stock, Series E)	KEY PrI	New York Stock Exchange
Depositary Shares (each representing a 1/40th interest in a share of Fixed Rate Perpetual Non-Cumulative Preferred Stock, Series F)	KEY PrJ	New York Stock Exchange
Depositary Shares (each representing a 1/40th interest in a share of Fixed Rate Perpetual Non-Cumulative Preferred Stock, Series G)	KEY PrK	New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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 ☒

The aggregate market value of voting stock held by nonaffiliates of the Registrant was $17,805,275,417 (based on the June 28, 2019, closing price of KeyCorp Common Shares of $17.75 as reported on the New York Stock Exchange). As of February 21, 2020, there were 969,889,701 Common Shares outstanding.

Certain specifically designated portions of KeyCorp's definitive Proxy Statement for its 2020 Annual Meeting of Shareholders are incorporated by reference into Part III of this Form 10-K.

Forward-looking Statements

From time to time, we have made or will make forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements do not relate strictly to historical or current facts. Forward-looking statements usually can be identified by the use of words such as “goal,” “objective,” “plan,” “expect,” “assume,” “anticipate,” “intend,” “project,” “believe,” “estimate,” or other words of similar meaning. Forward-looking statements provide our current expectations or forecasts of future events, circumstances, results or aspirations. Our disclosures in this report contain forward-looking statements. We may also make forward-looking statements in other documents filed with or furnished to the SEC. In addition, we may make forward-looking statements orally to analysts, investors, representatives of the media and others.

Forward-looking statements, by their nature, are subject to assumptions, risks, and uncertainties, many of which are outside of our control. Our actual results may differ materially from those set forth in our forward-looking statements. There is no assurance that any list of risks and uncertainties or risk factors is complete. Factors that could cause our actual results to differ from those described in forward-looking statements include, but are not limited to:

- our concentrated credit exposure in commercial and industrial loans;
- deterioration of commercial real estate market fundamentals;
- defaults by our loan counterparties or clients;
- adverse changes in credit quality trends;
- declining asset prices;
- the extensive regulation of the U.S. financial services industry;
- changes in accounting policies, standards, and interpretations;
- operational or risk management failures by us or critical third parties;
- breaches of security or failures of our technology systems due to technological or other factors and cybersecurity threats;
- negative outcomes from claims or litigation;
- failure or circumvention of our controls and procedures;
- the occurrence of natural or man-made disasters, global pandemics, conflicts, or terrorist attacks, or other adverse external events;
- evolving capital and liquidity standards under applicable regulatory rules;
- disruption of the U.S. financial system;
- our ability to receive dividends from our subsidiaries, including KeyBank;
- unanticipated changes in our liquidity position, including but not limited to, changes in our access to or the cost of funding and our ability to secure alternative funding sources;
- downgrades in our credit ratings or those of KeyBank;
- a reversal of the U.S. economic recovery due to financial, political or other shocks;
- our ability to anticipate interest rate changes and manage interest rate risk;
- uncertainty surrounding the transition from LIBOR to an alternate reference rate;
- deterioration of economic conditions in the geographic regions where we operate;
- the soundness of other financial institutions;
- our ability to attract and retain talented executives and employees and to manage our reputational risks;
- our ability to timely and effectively implement our strategic initiatives;
- increased competitive pressure;
- our ability to adapt our products and services to industry standards and consumer preferences;
- unanticipated adverse effects of strategic partnerships or acquisitions and dispositions of assets or businesses; and
- our ability to develop and effectively use the quantitative models we rely upon in our business planning.

Any forward-looking statements made by us or on our behalf speak only as of the date they are made, and we do not undertake any obligation to update any forward-looking statement to reflect the impact of subsequent events or circumstances. Before making an investment decision, you should carefully consider all risks and uncertainties disclosed in our SEC filings, including this report on Form 10-K and our subsequent reports on Forms 10-Q and 8-K and our registration statements under the Securities Act of 1933, as amended, all of which are or will upon filing be accessible on the SEC’s website at www.sec.gov and on our website at www.key.com/ir.

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Terminology

Throughout this discussion, references to “Key,” “we,” “our,” “us,” and similar terms refer to the consolidated entity consisting of KeyCorp and its subsidiaries. “KeyCorp” refers solely to the parent holding company, and “KeyBank” refers solely to KeyCorp’s subsidiary bank, KeyBank National Association. “KeyBank (consolidated)” refers to the consolidated entity consisting of KeyBank and its subsidiaries.

We want to explain some industry-specific terms at the outset so you can better understand the discussion that follows.

- We use the phrase ***continuing operations*** in this document to mean all of our businesses other than the our government-guaranteed and private education lending business and Austin. The government-guaranteed and private education lending business and Austin have been accounted for as ***discontinued operations*** since 2009.
- We engage in ***capital markets activities*** primarily through business conducted by our Commercial Bank segment. These activities encompass a variety of products and services. Among other things, we trade securities as a dealer, enter into derivative contracts (both to accommodate clients’ financing needs and to mitigate certain risks), and conduct transactions in foreign currencies (both to accommodate clients’ needs and to benefit from fluctuations in exchange rates).
- For regulatory purposes, capital is divided into two classes. Federal regulations currently prescribe that at least one-half of a bank or BHC’s ***total risk-based capital*** must qualify as ***Tier 1 capital***. Both total and Tier 1 capital serve as bases for several measures of capital adequacy, which is an important indicator of financial stability and condition. Banking regulators evaluate a component of Tier 1 capital, known as ***Common Equity Tier 1***, under the ***Regulatory Capital Rules***. The “Capital” section of this report under the heading “Capital adequacy” provides more information on total capital, Tier 1 capital, and the Regulatory Capital Rules, including Common Equity Tier 1, and describes how these measures are calculated.

The acronyms and abbreviations identified below are used in the Notes to Consolidated Financial Statements as well as in the Management's Discussion and Analysis of Financial Condition and Results of Operations. You may find it helpful to refer back to this page as you read this report.

ABO: Accumulated benefit obligation.
ALCO: Asset/Liability Management Committee.
ALLL: Allowance for loan and lease losses.
A/LM: Asset/liability management.
AML: Anti-money laundering.
AOCI: Accumulated other comprehensive income (loss).
APBO: Accumulated postretirement benefit obligation.
ASC: Accounting Standards Codification.
ASU: Accounting Standards Update.
ATMs: Automated teller machines.
Austin: Austin Capital Management, Ltd.
BSA: Bank Secrecy Act.
BHCA: Bank Holding Company Act of 1956, as amended.
BHCs: Bank holding companies.
Board: KeyCorp Board of Directors.
CAPM: Capital Asset Pricing Model.
CCAR: Comprehensive Capital Analysis and Review.
Cain Brothers: Cain Brothers & Company, LLC.
CECL: Current Expected Credit Losses.
CFPB: Consumer Financial Protection Bureau, also known as the Bureau of Consumer Financial Protection.
CFTC: Commodities Futures Trading Commission.
CMBS: Commercial mortgage-backed securities.
CMO: Collateralized mortgage obligation.
Common Shares: KeyCorp common shares, $1 par value.
CVA: Credit Valuation Adjustment.
DIF: Deposit Insurance Fund of the FDIC.
Dodd-Frank Act: Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.
EBITDA: Earnings before interest, taxes, depreciation, and amortization.
EPS: Earnings per share.
ERISA: Employee Retirement Income Security Act of 1974.
ERM: Enterprise risk management.
EVE: Economic value of equity.
FASB: Financial Accounting Standards Board.
FDIA: Federal Deposit Insurance Act, as amended.
FDIC: Federal Deposit Insurance Corporation.
Federal Reserve: Board of Governors of the Federal Reserve System.
FHLB: Federal Home Loan Bank of Cincinnati.
FHLMC: Federal Home Loan Mortgage Corporation.
FICO: Fair Isaac Corporation.
FINRA: Financial Industry Regulatory Authority.
First Niagara: First Niagara Financial Group, Inc.
FNMA: Federal National Mortgage Association.
FSOC: Financial Stability Oversight Council.
FVA: Fair value of employee benefit plan assets.
GAAP: U.S. generally accepted accounting principles.
GNMA: Government National Mortgage Association.
HelloWallet: HelloWallet, LLC.
IRS: Internal Revenue Service.
ISDA: International Swaps and Derivatives Association.
KBCM: KeyBanc Capital Markets, Inc.
KCC: Key Capital Corporation.
KCDC: Key Community Development Corporation.
KEF: Key Equipment Finance.
KIBS: Key Insurance & Benefits Services, Inc.
LCR: Liquidity coverage ratio.
LIBOR: London Interbank Offered Rate.
LIHTC: Low-income housing tax credit.
Moody's: Moody's Investor Services, Inc.
MRM: Market Risk Management group.
N/A: Not applicable.
Nasdaq: The Nasdaq Stock Market LLC.
NFA: National Futures Association.
N/M: Not meaningful.
NOW: Negotiable Order of Withdrawal.
NPR: Notice of proposed rulemaking.
NYSE: New York Stock Exchange.
OCC: Office of the Comptroller of the Currency.
OCI: Other comprehensive income (loss).
OREO: Other real estate owned.
OTTI: Other-than-temporary impairment.
PBO: Projected benefit obligation.
PCCR: Purchased credit card relationship.
PCI: Purchased credit impaired.
S&P: Standard and Poor's Ratings Services, a Division of The McGraw-Hill Companies, Inc.
SEC: U.S. Securities & Exchange Commission.
SIFIs: Systemically important financial institutions, including large, interconnected BHCs and nonbank financial companies designated by FSOC for supervision by the Federal Reserve.
TCJ Act: Tax Cuts and Jobs Act.
TDR: Troubled debt restructuring.
TE: Taxable-equivalent.
U.S. Treasury: United States Department of the Treasury.
VaR: Value at risk.
VEBA: Voluntary Employee Beneficiary Association.
VIE: Variable interest entity.

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PART I

ITEM 1. BUSINESS

Overview

KeyCorp, organized in 1958 under the laws of the State of Ohio, is headquartered in Cleveland, Ohio. We are a BHC under the BHCA and one of the nation’s largest bank-based financial services companies, with consolidated total assets of approximately $145.0 billion at December 31, 2019. KeyCorp is the parent holding company for KeyBank National Association, its principal subsidiary, through which most of our banking services are provided. Through KeyBank and certain other subsidiaries, we provide a wide range of retail and commercial banking, commercial leasing, investment management, consumer finance, student loan refinancing, commercial mortgage servicing and special servicing, and investment banking products and services to individual, corporate, and institutional clients through two major business segments: Consumer Bank and Commercial Bank.

As of December 31, 2019, these services were provided across the country through KeyBank’s 1,098 full-service retail banking branches and a network of 1,420 ATMs in 15 states, as well as additional offices, online and mobile banking capabilities, and a telephone banking call center. Additional information pertaining to our two business segments is included in the “Business Segment Results” section in Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations of this report, and in Note 25 (“Business Segment Reporting”) of the Notes to Consolidated Financial Statements presented in Item 8. Financial Statements and Supplementary Data, which are incorporated herein by reference. Key had an average of 17,045 full-time equivalent employees for 2019.

In addition to the customary banking services of accepting deposits and making loans, our bank and its trust company subsidiary offer personal and institutional trust custody services, securities lending, personal financial and planning services, access to mutual funds, treasury services, and international banking services. Through our bank, trust company, and registered investment adviser subsidiaries, we provide investment management services to clients that include large corporate and public retirement plans, foundations and endowments, high-net-worth individuals, and multi-employer trust funds established for providing pension or other benefits to employees. The Consumer Bank also purchases retail auto sales contracts via a network of auto dealerships. The auto dealerships finance the sale of automobiles as the initial lender and then assign the contracts to us pursuant to dealer agreements.

We provide other financial services — both within and outside of our primary banking markets — through various nonbank subsidiaries. These services include community development financing, securities underwriting, investment banking and capital markets products, and brokerage. We also provide merchant services to businesses.

KeyCorp is a legal entity separate and distinct from its banks and other subsidiaries. Accordingly, the right of KeyCorp, its security holders, and its creditors to participate in any distribution of the assets or earnings of its banks and other subsidiaries is subject to the prior claims of the creditors of such banks and other subsidiaries, except to the extent that KeyCorp’s claims in its capacity as a creditor may be recognized.

We derive the majority of our revenues within the United States from customers domiciled in the United States. Revenue from foreign countries and external customers domiciled in foreign countries was immaterial to our consolidated financial statements.

Demographics

In the first quarter of 2019, we revised our management structure and changed our basis of presentation into two business segments, Consumer Bank and Commercial Bank. Note 25 (“Business Segment Reporting”) describes the products and services offered by each of these business segments and provides more detailed financial information pertaining to the segments, including changes in basis of presentation.

The Consumer Bank serves individuals and small businesses throughout our 15-state branch footprint by offering a variety of deposit and investment products, personal finance and financial wellness services, lending, student loan refinancing, mortgage and home equity, credit card, treasury services, and business advisory services. The Consumer Bank also purchases retail auto sales contracts via a network of auto dealerships. The auto dealerships finance the sale of automobiles as the initial lender and then assign the contracts to us pursuant to dealer agreements. In addition, wealth management and investment services are offered to assist non-profit and high-net-worth clients with their banking, trust, portfolio management, charitable giving, and related needs.

The Commercial Bank is an aggregation of our Institutional and Commercial operating segments. The Commercial operating segment is a full-service corporate bank focused principally on serving the needs of middle market clients in seven industry sectors: consumer, energy, healthcare, industrial, public sector, real estate, and technology. The Commercial operating segment is also a significant servicer of commercial mortgage loans and a significant special servicer of CMBS. The Institutional operating segment delivers a broad suite of banking and capital markets products to its clients, including syndicated finance, debt and equity capital markets, commercial payments, equipment finance, commercial mortgage banking, derivatives, foreign exchange, financial advisory, and public finance.

Additional Information

The following financial data is included in this report in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, and Item 8. Financial Statements and Supplementary Data, and is incorporated herein by reference as indicated below:

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Our executive offices are located at 127 Public Square, Cleveland, Ohio 44114-1306, and our telephone number is (216) 689-3000. Our website is www.key.com, and the investor relations section of our website may be reached through www.key.com/ir. We make available free of charge, on or through the investor relations section of our website, annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as well as proxy statements, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Also posted on our website, and available in print upon request from any shareholder to our Investor Relations Department, are the charters for our Technology Committee, Audit Committee, Compensation and Organization Committee, Executive Committee, Nominating and Corporate Governance Committee, and Risk Committee; our Corporate Governance Guidelines; the Code of Business Conduct and Ethics for our directors, officers, and employees; our Standards for Determining Independence of Directors; our policy for Review of Transactions Between KeyCorp and Its Directors, Executive Officers and Other Related Persons; and our Statement of Political Activity. Within the time period required by the SEC and the NYSE, we will post on our website any amendment to the Code of Ethics and any waiver applicable to any senior executive officer or director. We also make available a summary of filings made with the SEC of statements of beneficial ownership of our equity securities filed by our directors and officers under Section 16 of the Exchange Act. The "Regulatory Disclosures & Filings" section under the "Financials" tab of the investor relations section of our website includes public disclosures concerning our historic annual and mid-year stress-testing activities under the Dodd-Frank Act and our quarterly regulatory capital disclosures under the third pillar of Basel III.

Information contained on or accessible through our website or any other website referenced in this report is not part of this report. References to websites in this report are intended to be inactive textual references only.

Shareholders may obtain a copy of any of the above-referenced corporate governance documents by writing to our Investor Relations Department at Investor Relations, KeyCorp, 127 Public Square, Mailcode OH-01-27-0737, Cleveland, Ohio 44114-1306; by calling (216) 689-4221; or by sending an e-mail to investor_relations@keybank.com.

Competition

The market for banking and related financial services is highly competitive. Key competes with other providers of financial services, such as BHCs, commercial banks, savings associations, credit unions, mortgage banking companies, finance companies, mutual funds, insurance companies, investment management firms, investment banking firms, broker-dealers, and other local, regional, national, and global institutions that offer financial services. Some of our competitors are larger and may have more financial resources, while some of our competitors enjoy fewer regulatory constraints and may have lower cost structures. The financial services industry has become more competitive as technology advances have lowered barriers to entry, enabling more companies, including nonbank companies, to provide financial services. Technological advances may diminish the importance of depository institutions and other financial institutions. Mergers and acquisitions have also led to increased concentration in the banking industry, placing added competitive pressure on Key's core banking products and services as we see competitors enter some of our markets or offer similar products. We compete by offering quality products and innovative services at competitive prices, and by maintaining our product and service offerings to keep pace with customer preferences and industry standards.

Information About Our Executive Officers

KeyCorp's executive officers are principally responsible for making policy for KeyCorp, subject to the supervision and direction of the Board. All executive officers are subject to annual election at the annual organizational meeting of the Board held each May.

Set forth below are the names and ages of the executive officers of KeyCorp as of December 31, 2019, the positions held by each at KeyCorp during the past five years, and the year each first became an executive officer of KeyCorp. On January 1, 2020, Paul Harris retired and Craig Beazer replaced him as KeyCorp's General Counsel. On January 16, 2020, Victor Alexander became Head of Consumer Bank. Because Messrs. Midkiff and Beazer have been employed at KeyCorp for less than five years, information is being provided concerning their prior business experience. There are no family relationships among the directors or the executive officers.

Victor B. Alexander (40) - Mr. Alexander became Head of Consumer Bank and an executive officer of KeyCorp on January 16, 2020. Prior to that time, he served as the Head of Home Lending from October 2018 to January 2020, Treasurer from July 2017 to October 2018, Merger Integration Executive from December 2015 to June 2017, and Head of Corporate Strategy from January 2015 to December 2015.

Craig T. Beazer (52) - Mr. Beazer became General Counsel of KeyCorp and an executive officer of KeyCorp on January 1, 2020. Mr. Beazer joined KeyCorp in July 2018 as Deputy General Counsel and served in that role until being appointed General Counsel. Mr. Beazer also became the Secretary of KeyCorp in July 2019. Prior to joining KeyCorp, he served as Deputy General Counsel and Corporate Secretary of The Bank of New York Mellon Corporation from January 2015 to July 2018.

Amy G. Brady (53) - Ms. Brady is KeyCorp's Chief Information Officer, serving in that role since May 2012. Ms. Brady has been an executive officer of KeyCorp since she joined in 2012. She has been a director of DuPont de Nemours, Inc., a multi-industry specialty solutions company, since 2019.

Dennis A. Devine (48) - At December 31, 2019, Mr. Devine was Head of Consumer Bank. He previously served as the Co-President, Consumer and Small Business of Key Community Bank from April 2014 to May 2019 and became an executive officer of KeyCorp in May 2014. From 2012 to 2014, Mr. Devine served as Executive Vice President in various roles, including as head of the Consumer & Small Business Segment and head of Integrated Channels and Community Bank Strategy for Key Community Bank.

Trina M. Evans (55) - Ms. Evans has been the Director of Corporate Center for KeyCorp since August 2012. Prior to this role, Ms. Evans was the Chief Administrative Officer for Key Community Bank and the Director of Client Experience for KeyBank. During her career with KeyCorp, she has served in a variety of senior management roles associated with the call center, internet banking, retail banking, distribution management and information technology. She became an executive officer of KeyCorp in March 2013.

Brian L. Fishel (54) - Mr. Fishel became the Chief Human Resources Officer and an executive officer of KeyCorp in May 2018. From 2013 to 2018, he served as the Director of Talent Management for KeyCorp.

Christopher M. Gorman (59) - In September 2019, Mr. Gorman was appointed President and Chief Operating Officer of KeyCorp. At that time, it was announced that he will succeed Ms. Mooney as Chairman and Chief Executive Officer on May 1, 2020. Mr. Gorman previously served as President of Banking and Vice Chairman from 2017 to September 2019. From 2016 to 2017, he served as Merger Integration Executive responsible for leading the integration efforts related to KeyCorp's merger with First Niagara. Prior to that, Mr. Gorman was the President of Key Corporate Bank from 2010 to 2016. He previously served as a KeyCorp Senior Executive Vice President and head of Key National Banking during 2010. Mr. Gorman was an Executive Vice President of KeyCorp (2002 to 2010) and served as President of KBCM (2003 to 2010). He became an executive officer of KeyCorp in 2010.

Paul N. Harris (61) - Mr. Harris served as the General Counsel of KeyCorp from 2003 until his retirement from that position on January 1, 2020, and was an executive officer of KeyCorp from 2004 until January 1, 2020. Mr. Harris also served as the Secretary of KeyCorp from 2003 to July 2019.

Clark H.I. Khayat (48) - Mr. Khayat rejoined KeyCorp as Chief Strategy Officer in January 2018. Mr. Khayat previously served as an Executive Vice President and Head of Key's Enterprise Commercial Payments group from April 2014 to June 2016 and an Executive Vice President in Corporate Strategy from July 2012 to April 2014. He became an executive officer of KeyCorp in September 2018.

Donald R. Kimble (59) - Mr. Kimble has been the Chief Financial Officer of KeyCorp since June 2013. In 2017, Mr. Kimble was also named Vice Chairman. In January 2020, Mr. Kimble was also appointed Chief Administrative Officer. Mr. Kimble became an executive officer upon joining KeyCorp in June 2013.

Angela G. Mago (54) - Ms. Mago is the Head of Commercial Bank. She previously served as Co-Head of Key Corporate Bank from 2016 to May 2019. She also serves as Head of Real Estate Capital for Key, a role she has held since 2014. From 2011 to 2014, Ms. Mago was Head of Key's Commercial Mortgage Group. She became an executive officer of KeyCorp in 2016.

Mark W. Midkiff (57) - Mr. Midkiff became Chief Risk Officer and an executive officer of KeyCorp in January 2018. Prior to joining KeyCorp, Mr. Midkiff served as the Deputy Chief Credit Officer of BB&T from May 2017 to December 2017. He served as Chief Risk Officer of GE Capital from May 2015 to January 2017 and Chief Risk Officer of MUFG Union Bank from 2009 to April 2015.

Beth E. Mooney (64) - Ms. Mooney has been the Chairman and Chief Executive Officer of KeyCorp since 2011, and an executive officer of KeyCorp since 2006. Prior to becoming Chairman and Chief Executive Officer, she served in a variety of roles with KeyCorp, including President and Chief Operating Officer and Vice Chair and head of Key Community Bank. She has been a director of AT&T, a publicly-traded telecommunications company, since 2013, and a director of Ford Motor Company, an automobile manufacturer, since 2019. In September 2019, it was announced that Ms. Mooney will retire as Chairman and Chief Executive Officer of KeyCorp effective May 1, 2020.

Andrew J. Paine III (50) - Mr. Paine is the Head of Institutional Bank. He previously served as Co-Head of Key Corporate Bank from 2016 to May 2019. He also serves as President of KeyBanc Capital Markets Inc., a role he has held since 2013. From 2010 to 2013, Mr. Paine was the Co-Head of KeyBanc Capital Markets Inc. He became an executive officer of KeyCorp in 2016.

Kevin T. Ryan (58) - Mr. Ryan has been the Chief Risk Review Officer and General Auditor of KeyCorp since 2007. He became an executive officer of KeyCorp in 2016.

Douglas M. Schosser (49) - Mr. Schosser has been the Chief Accounting Officer and an executive officer of KeyCorp since May 2015. Prior to becoming the Chief Accounting Officer, Mr. Schosser served as an Integration Manager at KeyCorp. From 2010 to 2014, he served as the Chief Financial Officer of Key Corporate Bank.

Supervision and Regulation

The regulatory framework applicable to BHCs and banks is intended primarily to protect consumers, the DIF, taxpayers and the banking system as a whole, rather than to protect the security holders and creditors of financial services companies. Comprehensive reform of the legislative and regulatory environment for financial services companies occurred in 2010 and remains ongoing. We cannot predict changes in applicable laws, regulations or regulatory agency policies, but any such changes may materially affect our business, financial condition, results of operations, or access to liquidity or credit.

Overview

Federal law establishes a system of regulation under which the Federal Reserve is the umbrella regulator for BHCs, while their subsidiaries are principally regulated by prudential or functional regulators: (i) the OCC for national banks and federal savings associations; (ii) the FDIC for state non-member banks and savings associations; (iii) the Federal Reserve for state member banks; (iv) the CFPB for consumer financial products or services; (v) the SEC and FINRA for securities broker/dealer activities; (vi) the SEC, CFTC, and NFA for swaps and other derivatives; and (vii) state insurance regulators for insurance activities. Certain specific activities, including traditional bank trust and fiduciary activities, may be conducted in a bank without the bank being deemed a “broker” or a “dealer” in securities for purposes of securities functional regulation.

Under the BHCA, BHCs generally may not directly or indirectly own or control more than 5% of the voting shares, or substantially all of the assets, of any bank, without prior approval from the Federal Reserve. In addition, BHCs are generally prohibited from engaging in commercial or industrial activities. However, a BHC that satisfies certain requirements regarding management, capital adequacy, and Community Reinvestment Act performance may elect to be treated as a Financial Holding Company (“FHC”) for purposes of federal law, and as a result may engage in a substantially broader scope of activities that are considered to be financial in nature or complementary to those activities. KeyCorp has elected to be treated as a FHC and, as such, is authorized to engage in securities underwriting and dealing, insurance agency and underwriting, and merchant banking activities. In addition, the Federal Reserve has permitted FHCs, like KeyCorp, to engage in the following activities, under the view that such activities are complementary to a financial activity: physical commodities trading activities, energy management services, and energy tolling, among others.

Under federal law, a BHC also must serve as a source of financial strength to its subsidiary depository institution(s) by providing financial assistance in the event of financial distress. This support may be required when the BHC does not have the resources to, or would prefer not to, provide it. Certain loans by a BHC to a subsidiary bank are subordinate in right of payment to deposits in, and certain other indebtedness of, the subsidiary bank. In addition, federal law provides that in the bankruptcy of a BHC, any commitment by the BHC to a federal bank regulatory agency to maintain the capital of a subsidiary bank will be assumed by the bankruptcy trustee and entitled to priority of payment.

The Dodd-Frank Act created the FSOC to overlay the U.S. supervisory framework for BHCs, insured depository institutions, and other financial service providers, by serving as a systemic risk oversight body. Specifically, the FSOC is authorized to: (i) identify risks to U.S. financial stability that could arise from the material financial distress or failure, or ongoing activities, of large, interconnected SIFIs, or that could arise outside the financial services marketplace; (ii) promote market discipline by eliminating expectations that the U.S. government will shield shareholders, creditors, and counterparties from losses in the event of failure; and (iii) respond to emerging threats to the stability of the U.S. financial system. The FSOC is responsible for facilitating regulatory coordination; information collection and sharing; designating nonbank financial companies for consolidated supervision by the Federal Reserve; designating systemic financial market utilities and systemic payment, clearing, and settlement activities requiring prescribed risk management standards and heightened federal regulatory oversight; recommending stricter standards for SIFIs; and, together with the Federal Reserve, determining whether action should be taken to break up firms that pose a grave threat to U.S. financial stability.

As a FHC, KeyCorp is subject to regulation, supervision, and examination by the Federal Reserve under the BHCA. Our national bank subsidiaries and their subsidiaries are subject to regulation, supervision, and examination by the OCC. At December 31, 2019, we operated one full-service, FDIC-insured national bank subsidiary, KeyBank, and one national bank subsidiary that is limited to fiduciary activities. The FDIC also has certain, more limited regulatory, supervisory, and examination authority over KeyBank and KeyCorp under the FDIA and the Dodd-Frank Act.

We have other financial services subsidiaries that are subject to regulation, supervision, and examination by the Federal Reserve, as well as other state and federal regulatory agencies and self-regulatory organizations. Because KeyBank engages in derivative transactions, in 2013 it provisionally registered as a swap dealer with the CFTC and became a member of the NFA, the self-regulatory organization for participants in the U.S. derivatives industry. Our securities brokerage and asset management subsidiaries are subject to supervision and regulation by the SEC, FINRA, and state securities regulators, and our insurance subsidiaries are subject to regulation by the insurance regulatory authorities of the states in which they operate. Our other nonbank subsidiaries are subject to laws and regulations of both the federal government and the various states in which they are authorized to do business.

Regulatory capital requirements

Background

KeyCorp and KeyBank are subject to regulatory capital requirements that are based largely on the work of an international group of supervisors known as the Basel Committee on Banking Supervision ("Basel Committee"). The Basel Committee is responsible for establishing international bank supervisory standards for implementation in member jurisdictions, to enhance and align bank regulation on a global scale, and to promote financial stability.
The regulatory capital framework developed by the Basel Committee and implemented in the United States is a predominately risk-based capital framework that establishes minimum capital requirements based on the amount of regulatory capital a banking organization maintains relative to the amount of its total assets, adjusted to reflect credit risk ("risk-weighted assets"). Each banking organization subject to this regulatory capital framework is required to satisfy certain minimum risk-based capital measures (e.g., a tier 1 risk-based capital ratio requirement of tier 1 capital to total risk-weighted assets), and in the United States, a minimum leverage ratio requirement of tier 1 capital to average total on-balance sheet assets, which serves as a backstop to the risk-based measures.
A capital instrument is assigned to one of two tiers based on the relative strength and ability of that instrument to absorb credit losses on a going concern basis. Capital instruments with relatively robust loss-absorption capacity are assigned to tier 1, while other capital instruments with relatively less loss-absorption capacity are assigned to tier 2. A banking organization's total capital equals the sum of its tier 1 and tier 2 capital.

The Basel Committee also developed a market risk capital framework (that also has been implemented in the United States) to address the substantial exposure to market risk faced by banking organizations with significant trading activity and augment the credit risk-based capital requirements described above. For example, the minimum total risk-based capital ratio requirement for a banking organization subject to the market risk capital rule equals the ratio of the banking organization's total capital to the sum of its credit risk-weighted assets and market risk-weighted assets. Only KeyCorp is subject to the market risk capital rule, as KeyBank does not engage in substantial trading activity.

Basel III

To address deficiencies in the international regulatory capital standards identified during the 2007-2009 global financial crisis, in 2010 the Basel Committee released comprehensive revisions to the international regulatory capital framework, commonly referred to as "Basel III." The Basel III revisions are designed to strengthen the quality and quantity of regulatory capital, in part through the introduction of a Common Equity Tier 1 capital requirement; provide more comprehensive and robust risk coverage, particularly for securitization exposures, equities, and off-balance sheet positions; and address pro-cyclicality concerns through the implementation of capital buffers. The Basel Committee also released a series of revisions to the market risk capital framework to address deficiencies identified during its initial implementation (e.g., arbitrage opportunities between the credit risk-based and market risk capital rules) and in connection with the global financial crisis.

In July 2013, the U.S. banking agencies adopted a final rule to implement Basel III with an effective date of January 1, 2015, and a multi-year transition period ending on December 31, 2018 ("Regulatory Capital Rules"). Consistent with the international framework, the Regulatory Capital Rules further restrict the type of instruments that may be recognized in tier 1 and tier 2 capital (including the phase out of trust preferred securities from tier 1 capital for BHCs above a certain asset threshold, like KeyCorp); establish a minimum Common Equity Tier 1 capital ratio requirement of 4.5% and capital buffers to absorb losses during periods of financial stress while allowing an institution to provide credit intermediation as it would during a normal economic environment; and refine several of the methodologies used for determining risk-weighted assets. The Regulatory Capital Rules provide additional requirements for large banking organizations with over $250 billion in total consolidated assets or $10 billion in foreign exposure, but those additional requirements do not apply to KeyCorp or KeyBank. Accordingly, for purposes of the Regulatory Capital Rules, KeyCorp and KeyBank are treated as “standardized approach” banking organizations.

Under the Regulatory Capital Rules, standardized approach banking organizations are required to meet the minimum capital and leverage ratios set forth in the following table. At December 31, 2019, Key had an estimated Common Equity Tier 1 Capital Ratio of 9.37% under the fully phased-in Regulatory Capital Rules. Also at December 31, 2019, based on the fully phased-in Regulatory Capital Rules, Key estimates that its capital and leverage ratios, after adjustment for market risk, would be as set forth in the following table.

Pro Forma Ratios vs. Minimum Capital Ratios Calculated Under the Fully Phased-In Regulatory Capital Rules

Ratios (including capital conservation buffer)	Regulatory Minimum Requirement	Capital Conservation Buffer [c]	Regulatory Minimum With Capital Conservation Buffer	Key December 31, 2019 Pro forma
Common Equity Tier 1 [a]	4.50%	2.50%	7.00%	9.37%
Tier 1 Capital	6.00	2.50	8.50	10.77
Total Capital	8.00	2.50	10.50	12.82
Leverage [b]	4.00	N/A	4.00	9.88

(a) See section entitled “GAAP to Non-GAAP Reconciliations,” which presents the computation of Common Equity Tier 1 capital under the fully phased-in regulatory capital rules.
(b) As a standardized approach banking organization, KeyCorp is not subject to the 3% supplemental leverage ratio requirement, which became effective January 1, 2018.
(c) Capital conservation buffer must consist of Common Equity Tier 1 capital. As a standardized approach banking organization, KeyCorp is not subject to the countercyclical capital buffer of up to 2.5% imposed upon an advanced approaches banking organization under the Regulatory Capital Rules.

Revised prompt corrective action framework

The federal prompt corrective action framework established under the FDIA groups FDIC-insured depository institutions into one of five prompt corrective action capital categories: “well capitalized,” “adequately capitalized,” “undercapitalized,” “significantly undercapitalized,” and “critically undercapitalized.” In addition to implementing the Basel III capital framework in the U.S., the Regulatory Capital Rules also revised the prompt corrective action capital category threshold ratios applicable to FDIC-insured depository institutions such as KeyBank, with an effective date of January 1, 2015. The Revised Prompt Corrective Action Framework table below identifies the capital category threshold ratios for a “well capitalized” and an “adequately capitalized” institution under the Prompt Corrective Action Framework.

“Well Capitalized” and “Adequately Capitalized” Capital Category Ratios under Revised Prompt Corrective Action Framework

Prompt Corrective Action	Capital Category	
Ratio	Well Capitalized [a]	Adequately Capitalized
Common Equity Tier 1 Risk-Based	6.5%	4.5%
Tier 1 Risk-Based	8.0	6.0
Total Risk-Based	10.0	8.0
Tier 1 Leverage [b]	5.0	4.0

(a) A “well capitalized” institution also must not be subject to any written agreement, order or directive to meet and maintain a specific capital level for any capital measure.
(b) As a standardized approach banking organization, KeyBank is not subject to the 3% supplemental leverage ratio requirement, which became effective January 1, 2018.

We believe that, as of December 31, 2019, KeyBank (consolidated) satisfied the risk-based and leverage capital requirements necessary to be considered “well capitalized” for purposes of the revised prompt corrective action framework. However, investors should not regard this determination as a representation of the overall financial condition or prospects of KeyBank because the prompt corrective action framework is intended to serve a limited supervisory function. Moreover, it is important to note that the prompt corrective action framework does not apply to BHCs, like KeyCorp.

Recent regulatory capital-related developments

In December 2017, the Basel Committee released its final revisions to Basel III. The revisions seek to restore credibility in the calculation of risk-weighted assets (“RWAs”) and improve the comparability of regulatory capital ratios across banking organizations by: (1) enhancing the robustness and risk-sensitivity of the standardized approach for credit risk, credit valuation adjustment, and operational risk; (2) constraining the use of internal models by placing limits on certain inputs used to calculate capital requirements under the internal ratings-based approach for credit risk (used by advanced approaches banking organizations) and removing the ability to use an internal model for purposes of determining the capital charge for credit valuation adjustment (“CVA”) risk and operational risk; (3) introducing a leverage ratio buffer to further limit the leverage of global systemically-important banks; and

(4) replacing the existing Basel II output floor with a more robust, risk-sensitive floor based on the Basel III standardized approach.

The U.S. federal banking agencies released a statement announcing their support for the Basel Committee's efforts, but cautioned that they will consider how to appropriately incorporate these revisions into the Regulatory Capital Rules, and that any proposed changes based on the Basel Committee revisions would be subject to notice-and-comment rulemaking. In view of the prohibition under the Dodd-Frank Act on the use of credit ratings in federal regulation, there is some uncertainty as to whether or how the agencies would implement the ratings-based aspects of the Basel Committee revisions to Basel III, as well as any other aspect of the Basel Committee revisions that permit the U.S. agencies to exercise home-country discretion, for example, due to differences in accounting or market practices, and legal requirements.

Subsequently, in December 2018, the Basel Committee released an update to its Pillar 3 disclosure framework, to more appropriately align it to the changes adopted under the Basel Committee's final revisions to Basel III. Before any action is taken by the federal banking agencies with respect to the revised Pillar 3 disclosure framework, the federal agencies must determine whether and to what extent they will implement the final revisions to Basel III released by the Basel Committee in December 2017.

In December 2018, the federal banking agencies published a final rule to amend their Regulatory Capital Rules to address the regulatory capital effects of forthcoming changes to GAAP set forth in the issuance by the FASB of ASU No. 2016-13, Financial Instruments - Credit Losses, Topic 326, Measurement of Credit Loses on Financial Instruments, which introduces the current expected credit loss methodology to replace the incurred loss methodology for financial assets. The final rule identifies which credit loss allowances under the new accounting standard are eligible for inclusion in a banking organization's regulatory capital and provides banking organizations with the option to phase in, over a three-year period, the adverse day-one regulatory capital effects of adoption of the new accounting standard on retained earnings, deferred tax assets, credit loss allowances, and average total consolidated assets. For SEC filers (excluding smaller reporting companies), such as KeyCorp, the new accounting standard will become effective for the first fiscal year starting after December 15, 2019. KeyCorp has elected to evenly phase in the capital impact from the adoption of CECL from 2020 to 2023.

On July 9, 2019, the federal banking agencies issued a final rule to simplify certain aspects of the Regulatory Capital Rules for standardized approach banking organizations, including Key. The final rule simplifies, for these banking organizations, the regulatory capital requirements for mortgage servicing assets, certain deferred tax assets arising from temporary differences, and investments in the capital of unconsolidated financial institutions. The final rule replaces multiple deduction thresholds with a single 25% deduction threshold for each of these categories and requires that a 250% risk weight be applied to mortgage servicing assets and deferred tax assets that are not deducted from capital. The final rule also simplifies the calculation of the amount of capital issued by a consolidated subsidiary of a banking organization and held by third parties that is includable in regulatory capital. In addition, the final rule makes certain technical amendments to the Regulatory Capital Rules that are applicable to standardized approach banking organizations as well as advanced approaches banking organizations. The final rule provided an effective date of October 1, 2019, for the technical amendments and an effective date of April 1, 2020, for the simplification changes. On November 13, 2019, the federal banking agencies published an amendment to the final rule to provide standardized approach banking organizations with the option to implement the simplification changes on either January 1, 2020, or April 1, 2020. We have chosen to implement the simplification changes on April 1, 2020.

In November 2019, the federal banking agencies adopted a final rule to amend the Regulatory Capital Rules by revising the definition of a high volatility commercial real estate ("HVCRE") exposure. HVCRE exposures are subject to a heightened risk weight under the Regulatory Capital Rules. The final rule conforms the HVCRE definition to statutory changes enacted in May 2018. The final rule also clarifies the treatment under the revised HVCRE definition of credit facilities that finance one-to-four family residential properties as well as credit facilities that finance the development of land. The effective date of the final rule is April 1, 2020.

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Liquidity requirements

U.S. banking organizations are subject to regulatory liquidity requirements based on international liquidity standards established by the Basel Committee in 2010, and subsequently revised between 2013 and 2014 (as revised, the “Basel III liquidity framework”). The Basel III liquidity framework establishes quantitative standards designed to ensure that a banking organization is appropriately positioned, from a balance sheet perspective, to satisfy its short- and long-term funding needs.

To address short-term liquidity risk, the Basel III liquidity framework established a liquidity coverage ratio (“Basel III LCR”), calculated as the ratio of a banking organization’s high-quality liquid assets to its total net cash outflows over 30 consecutive calendar days. In addition, to address long-term liquidity risk, the Basel III liquidity framework established a net stable funding ratio (“Basel III NSFR”), calculated as the ratio of the amount of stable funding available to a banking organization to its required amount of stable funding.

In October 2014, the federal banking agencies published a final rule to implement the Basel III LCR for U.S. banking organizations (the “Liquidity Coverage Rules”). Consistent with the Basel III LCR, the U.S. Liquidity Coverage Rules established a minimum LCR for certain internationally active bank and nonbank financial companies (excluding KeyCorp), and a modified version of the LCR (“Modified LCR”) for BHCs and other depository institution holding companies with over $50 billion in consolidated assets that are not internationally active (including KeyCorp). Under the Liquidity Coverage Rules, KeyCorp was required to calculate a Modified LCR on a monthly basis and was required to satisfy a minimum Modified LCR requirement of 100%. At December 31, 2019, KeyCorp’s Modified LCR was above 100%. In the future, KeyCorp may change the composition of its investment portfolio, increase the size of the overall investment portfolio, and modify product offerings to enhance or optimize our liquidity position. KeyBank was not subject to the LCR or the Modified LCR under the Liquidity Coverage Rules.

In December 2016, the Federal Reserve adopted a final rule to implement public disclosure requirements for the LCR and Modified LCR. Under the final rule, each calendar quarter KeyCorp was required to publicly disclose certain quantitative information regarding its Modified LCR calculation, together with a discussion of the factors that have a significant effect on its Modified LCR. KeyCorp began complying with these disclosure requirements for the calendar quarter beginning October 1, 2018.

The federal banking agencies commenced implementation of the Basel III NSFR in the United States in April and May 2016, with the release of a proposed rule to implement a minimum net stable funding ratio (“NSFR”) requirement for certain internationally active banking organizations (excluding KeyCorp) and a modified version of the minimum NSFR requirement (“Modified NSFR”) for BHCs and other depository institution holding companies with over $50 billion in consolidated assets that are not internationally active (including KeyCorp), together with quarterly public disclosure requirements. The comment period for the NPR expired on August 5, 2016. The federal banking agencies have not yet issued a final rule to implement the NSFR in the United States.

Large BHCs, like KeyCorp, are also subject to liquidity requirements contained in regulations adopted pursuant to the Dodd-Frank Act and the Economic Growth, Regulatory Relief, and Consumer Protection Act (“EGRRCPA”). As enacted in 2010, the Dodd-Frank Act required the Federal Reserve to impose enhanced prudential standards and early remediation requirements (collectively, “EPSs”), including enhanced liquidity standards, upon BHCs (like KeyCorp) with at least $50 billion in total consolidated assets.

In March 2014, the Federal Reserve published a final rule to implement certain of the EPSs required under the Dodd-Frank Act, including liquidity requirements relating to cash flow projections, a contingency funding plan, liquidity risk limits, the monitoring of liquidity risks (with respect to collateral, legal entities, currencies, business lines, and intraday exposures), liquidity stress testing, a liquidity buffer, and liquidity risk management requirements, including requirements that apply to the board of directors, the risk committee, senior management, and the independent review function. KeyCorp was required to comply with the final rule starting on January 1, 2015.

EGRRCPA, enacted on May 24, 2018, raised the asset threshold above which the Federal Reserve is required to apply EPSs to BHCs from $50 billion to $250 billion. EGRRCPA gave the Federal Reserve the authority, following notice and comment procedures, to continue to apply EPSs to any BHCs having at least $100 billion but less than $250 billion in total consolidated assets (like KeyCorp) if it determines that the application of the EPS is appropriate to prevent or mitigate risks to financial stability or to promote the safety and soundness of the BHC or BHCs, taking into consideration the BHC's or BHCs' capital structure, riskiness, complexity, financial activities, size, and other relevant factors.

In October 2019, the federal banking agencies issued two final rules related to the implementation of EGRRCPA ("Tailoring Rules"). The final rules established four risk-based categories of banking organizations with $100 billion or more in total consolidated assets and applied tailored regulatory requirements to each respective category. Based on Key's analysis of the Tailoring Rules, KeyCorp falls within the least restrictive of those categories ("Category IV Firms"). The Tailoring Rules became effective on December 31, 2019.

In one of the Tailoring Rules, the federal banking agencies amended various rules, including the rules governing standardized liquidity requirements, thereby applying tailored liquidity requirements to large banking organizations in each of the four risk-based categories of institutions described in the Tailoring Rules. Under this final rule, Category IV Firms with weighted short-term wholesale funding of less than $50 billion will not be subject to a reduced LCR. KeyCorp believes that it does not meet the $50 billion threshold and that it will not be subject to the reduced LCR. Thus, as of December 31, 2019, KeyCorp is no longer subject to an LCR requirement or an LCR public disclosure requirement.

In the other Tailoring Rule, the Federal Reserve amended certain of its rules governing EPSs to apply tailored regulatory standards (including liquidity standards) to large BHCs in each of the four risk-based categories of institutions described in the Tailoring Rules. Under this rule, Category IV Firms (like KeyCorp) are required to conduct internal liquidity stress tests quarterly rather than monthly as was previously the case and are subject to simplified liquidity risk management requirements, including requirements to adopt a set of liquidity risk limits that is more limited than previously required, calculate collateral positions monthly rather than weekly, and monitor fewer elements of intraday liquidity risk exposures. Category IV Firms are still required to maintain a liquidity buffer that is sufficient to meet the projected net stressed cash-flow need over a 30-day planning horizon under the firm's internal liquidity stress test and remain subject to monthly tailored FR 2052a liquidity reporting requirements.

Capital planning and stress testing

The Federal Reserve's capital plan rule requires each U.S.-domiciled, top-tier BHC with total consolidated assets of at least $100 billion (like KeyCorp) to develop and maintain a written capital plan supported by a robust internal capital adequacy process. The capital plan must be submitted to the Federal Reserve for supervisory review in connection with its CCAR (described below). The supervisory review includes an assessment of many factors, including KeyCorp's ability to maintain capital above each minimum regulatory capital ratio on a pro forma basis under expected and stressful conditions throughout the planning horizon. KeyCorp is also subject to the Federal Reserve's supervisory expectations for capital planning and capital positions as a large, noncomplex BHC, as set forth in a Federal Reserve guidance document issued on December 18, 2015 ("SR Letter 15-19"). Under SR Letter 15-19, the Federal Reserve identifies its core capital planning expectations regarding governance; risk management; internal controls; capital policy; capital positions; incorporating stressful conditions and events; and estimating impact on capital positions for large and noncomplex firms building upon the capital planning requirements under its capital plan and stress test rules. SR Letter 15-19 also provides detailed supervisory expectations on such a firm's capital planning processes.

The Federal Reserve's CCAR is an intensive assessment of the capital adequacy of large U.S. BHCs and of the practices these BHCs use to assess their capital needs. The Federal Reserve expects BHCs subject to CCAR to have and maintain regulatory capital in an amount that is sufficient to withstand a severely adverse operating environment and, at the same time, be able to continue operations, maintain ready access to funding, meet obligations to creditors and counterparties, and provide credit intermediation.

The Federal Reserve conducts a supervisory stress test on KeyCorp, pursuant to which the Federal Reserve projects revenue, expenses, losses, and resulting post-stress capital levels and regulatory capital ratios under conditions that affect the U.S. economy or the financial condition of KeyCorp, including supervisory baseline and severely adverse scenarios (and through 2018, an adverse scenario), that are determined by the Federal Reserve. KeyCorp and KeyBank have also been required to conduct their own company-run stress tests to assess the impact of stress scenarios (including supervisor-provided baseline, adverse, and severely adverse scenarios and, for KeyCorp, one KeyCorp-defined baseline scenario and at least one KeyCorp-defined stress scenario) on their consolidated earnings, losses, and capital over a nine-quarter planning horizon, taking into account their current condition, risks, exposures, strategies, and activities. While KeyBank has only had to conduct an annual stress test, KeyCorp has had to conduct both an annual and a mid-cycle stress test. KeyCorp and KeyBank have been required to report the results of their annual stress tests to the Federal Reserve and the OCC. KeyCorp has been required to report the results of its mid-cycle stress test to the Federal Reserve. Summaries of the results of these company-run stress tests have been disclosed each year under the “Regulatory Disclosures & Filings” section of the “Financials” tab of Key’s Investor Relations website: http://www.key.com/ir.

On February 5, 2019, the Federal Reserve announced that for 2019 certain less-complex BHCs with total consolidated assets between $100 billion and $250 billion (including KeyCorp) were not subject to supervisory stress testing or company-run stress testing and were not required to participate in CCAR or submit a capital plan to the Federal Reserve. However, the Federal Reserve indicated that each of these firms (including KeyCorp) remains subject to the requirement to develop and maintain a capital plan which will have to be reviewed and approved by the firm’s board of directors (or committee thereof) at least annually. KeyBank, like KeyCorp, did not have to conduct a company-run stress test in 2019 since the OCC informed OCC-regulated institutions with total consolidated assets from $100 billion to less than $250 billion that they will not be required to comply with any stress testing requirements in 2019.

One of the Tailoring Rules issued by the Federal Reserve in October 2019 to implement EGRRCPA changes the stress testing requirements applicable to BHCs that are Category IV Firms (like KeyCorp). Under this rule, Category IV Firms will no longer be required to conduct and publicly disclose the results of company-run stress tests and will be subject to a supervisory stress test conducted by the Federal Reserve every other year rather than every year as has been the case. In 2020, KeyCorp will be required to participate in the Federal Reserve’s CCAR process and will be subject to a supervisory stress test conducted by the Federal Reserve.

A separate rule was issued by the federal banking agencies in October 2019 to implement a provision in EGRRCPA that raised the asset threshold that triggers the requirement for federally-regulated banks to conduct company-run stress tests on an annual basis from $10 billion to $250 billion in total consolidated assets. Under this final rule, federally-regulated banks with total assets of less than $250 billion (like KeyBank) will no longer be required to conduct annual company-run stress tests. Also, this final rule removes the “adverse” scenario as a required scenario for all stress testing requirements applicable to BHCs and federally-regulated banks so that such stress tests will be required to include only “baseline” and “severely adverse” scenarios.

In a release published on April 10, 2018, the Federal Reserve invited comment on a proposal to integrate certain aspects of the Federal Reserve’s Regulatory Capital Rules with the CCAR and stress test rules, in order to simplify the overall capital framework that is currently applicable to banking organizations subject to the capital plan rule (including KeyCorp). Under the proposal, the Federal Reserve would (i) amend the capital conservation buffer requirement under the Regulatory Capital Rules by replacing the static risk-weighted assets component of the buffer with a new measure, the stress capital buffer, which would be based on the results of an individual banking organization’s supervisory stress test; (ii) introduce a stress leverage buffer requirement that would replace the existing Tier 1 leverage requirement under CCAR; (iii) modify certain assumptions under the supervisory stress test; (iv) remove the 30% dividend payout ratio limitation as a criterion for heightened supervisory scrutiny of an organization’s capital plan; and (v) eliminate the CCAR quantitative objection.

Under the proposed rule, a banking organization would not be subject to any limitations on capital distributions and discretionary bonus payments if it satisfies all minimum capital requirements and its capital conservation requirement (as amended to incorporate the stress capital buffer), stress leverage buffer requirement, and, if applicable, the advanced approaches capital conservation buffer requirement and supplementary leverage ratio standard (the latter two of which do not apply to KeyCorp). The comment period for this proposal ended on June 25, 2018. Key expects that the proposal would have a marginally favorable impact on its capital requirements.

Dividend restrictions

Federal law and regulation impose limitations on the payment of dividends by our national bank subsidiaries, like KeyBank. Historically, dividends paid by KeyBank have been an important source of cash flow for KeyCorp to pay dividends on its equity securities and interest on its debt. Dividends by our national bank subsidiaries are limited to the lesser of the amounts calculated under an earnings retention test and an undivided profits test. Under the earnings retention test, without the prior approval of the OCC, a dividend may not be paid if the total of all dividends declared by a bank in any calendar year is in excess of the current year's net income combined with the retained net income of the two preceding years. Under the undivided profits test, a dividend may not be paid in excess of a bank's undivided profits. Moreover, under the FDIA, an insured depository institution may not pay a dividend if the payment would cause it to be less than "adequately capitalized" under the prompt corrective action framework or if the institution is in default in the payment of an assessment due to the FDIC. Similarly, under the Regulatory Capital Rules, a banking organization that fails to satisfy the minimum capital conservation buffer requirement will be subject to certain limitations, which include restrictions on capital distributions. For more information about the payment of dividends by KeyBank to KeyCorp, please see Note 3 ("Restrictions on Cash, Dividends, and Lending Activities") in this report.

FDIA, Resolution Authority and Financial Stability

Deposit insurance and assessments

The DIF provides insurance coverage for domestic deposits funded through assessments on insured depository institutions like KeyBank. The amount of deposit insurance coverage for each depositor's deposits is $250,000 per depository.

The FDIC must assess the premium based on an insured depository institution's assessment base, calculated as its average consolidated total assets minus its average tangible equity. KeyBank's current annualized premium assessments can range from $.025 to $.45 for each $100 of its assessment base. The rate charged depends on KeyBank's performance on the FDIC's "large and highly complex institution" risk-assessment scorecard, which includes factors such as KeyBank's regulatory rating, its ability to withstand asset and funding-related stress, and the relative magnitude of potential losses to the FDIC in the event of KeyBank's failure.

In December 2016, the FDIC issued a final rule that imposes recordkeeping requirements on insured depository institutions with two million or more deposit accounts (including KeyBank), to facilitate rapid payment of insured deposits to customers if such an institution were to fail. The rule requires those insured depository institutions to: (i) maintain complete and accurate data on each depositor's ownership interest by right and capacity for all of the institution's deposit accounts; and (ii) develop the capability to calculate the insured and uninsured amounts for each deposit owner within 24 hours of failure. The FDIC will conduct periodic testing of compliance with these requirements, and institutions subject to the rule must submit to the FDIC a certification of compliance, signed by the bank's CEO, and deposit insurance coverage summary report on or before the mandatory compliance date and annually thereafter. The final rule became effective on April 1, 2017, with a mandatory compliance date of April 1, 2020. On July 16, 2019, the FDIC approved amendments that revise certain aspects of this rule. Among other things, the amendments to this rule (i) provide covered institutions with the option to extend the compliance date to no later than April 1, 2021, upon notification to the FDIC; (ii) clarify the certification requirement; (iii) revise the actions that must be taken for deposit accounts insured on a pass-through basis (where the bank's account holder is holding funds on behalf of the beneficial owners of the funds); and (iv) streamline the process for submitting exception requests to the FDIC.

Conservatorship and receivership of insured depository institutions

Upon the insolvency of an insured depository institution, the FDIC will be appointed as receiver or, in rare circumstances, conservator for the insolvent institution under the FDIA. In an insolvency, the FDIC may repudiate or disaffirm any contract to which the institution is a party if the FDIC determines that performance of the contract would be burdensome and that disaffirming or repudiating the contract would promote orderly administration of the institution's affairs. If the contractual counterparty made a claim against the receivership (or conservatorship) for breach of contract, the amount paid to the counterparty would depend upon, among other factors, the receivership (or conservatorship) assets available to pay the claim and the priority of the claim relative to others. In addition, the FDIC may enforce most contracts entered into by the insolvent institution, notwithstanding any provision that would terminate, cause a default, accelerate or give other rights under the contract solely because of the insolvency, the appointment of the receiver (or conservator), or the exercise of rights or powers by the receiver (or conservator). The FDIC may also transfer any asset or liability of the insolvent institution without obtaining approval or consent from the institution's shareholders or creditors. These provisions would apply to obligations and liabilities of KeyCorp's insured depository institution subsidiaries, such as KeyBank, including obligations under senior or subordinated debt issued to public investors.

Receivership of certain SIFIs

The Dodd-Frank Act created a new resolution regime, as an alternative to bankruptcy, known as the “orderly liquidation authority” (“OLA”) for certain SIFIs, including BHCs and their affiliates. Under the OLA, the FDIC would generally be appointed as receiver to liquidate and wind down a failing SIFI. The determination that a SIFI should be placed into OLA receivership is made by the U.S. Treasury Secretary, who must conclude that the SIFI is in default or in danger of default and that the SIFI’s failure poses a risk to the stability of the U.S. financial system. This determination must come after supermajority recommendations by the Federal Reserve and the FDIC, and consultation between the U.S. Treasury Secretary and the President.

If the FDIC is appointed as receiver under the OLA, its powers and the rights and obligations of creditors and other relevant parties would be determined exclusively under the OLA. The powers of a receiver under the OLA are generally based on the FDIC’s powers as receiver for insured depository institutions under the FDIA. Certain provisions of the OLA were modified to reduce disparate treatment of creditors’ claims between the U.S. Bankruptcy Code and the OLA. However, substantial differences between the two regimes remain, including the FDIC’s right to disregard claim priority in some circumstances, the use of an administrative claims procedure under OLA to determine creditors’ claims (rather than a judicial procedure in bankruptcy), the FDIC’s right to transfer claims to a bridge entity, and limitations on the ability of creditors to enforce contractual cross-defaults against potentially viable affiliates of the entity in receivership. OLA liquidity would be provided through credit support from the U.S. Treasury and assessments made, first, on claimants against the receivership that received more in the OLA resolution than they would have received in ordinary liquidation (to the full extent of the excess), and second, if necessary, on SIFIs like KeyCorp utilizing a risk-based methodology.

In December 2013, the FDIC published a notice for comment regarding its “single point of entry” resolution strategy under the OLA. This strategy involves the appointment of the FDIC as receiver for the SIFI’s top-level U.S. holding company only, while permitting the operating subsidiaries of the failed holding company to continue operations uninterrupted. As receiver, the FDIC would establish a bridge financial company for the failed holding company and would transfer the assets and a very limited set of liabilities of the receivership estate. The claims of unsecured creditors and other claimants in the receivership would be satisfied by the exchange of their claims for the securities of one or more new holding companies emerging from the bridge company. The FDIC has not taken any subsequent regulatory action relating to this resolution strategy under OLA since the comment period ended in March 2014.

Depositor preference

The FDIA provides that, in the event of the liquidation or other resolution of an insured depository institution, the claims of its depositors (including claims of its depositors that have subrogated to the FDIC) and certain claims for administrative expenses of the FDIC as receiver have priority over other general unsecured claims. If an insured depository institution fails, insured and uninsured depositors, along with the FDIC, will be placed ahead of unsecured, nondeposit creditors, including the institution’s parent BHC and subordinated creditors, in order of priority of payment.

Resolution plans

BHCs with at least $50 billion in total consolidated assets, like KeyCorp, have been required to periodically submit to the Federal Reserve and FDIC a plan discussing how the company could be rapidly and orderly resolved if the company failed or experienced material financial distress. Insured depository institutions with at least $50 billion in total consolidated assets, like KeyBank, have also been required to submit a resolution plan to the FDIC. These plans have been due annually unless the requirement to submit the plans was deferred by the regulators. The Federal Reserve and FDIC make available on their websites the public sections of resolution plans for the companies, including KeyCorp and KeyBank, that submitted plans. The public section of the resolution plans of KeyCorp and KeyBank is available at http://www.federalreserve.gov/supervisionreg/resolution-plans.htm and https://www.fdic.gov/regulations/reform/resplans/.

In October 2019, the Federal Reserve and FDIC adopted a final rule to modify the resolution planning requirements applicable to large BHCs. Under this final rule, BHCs with less than $250 billion in total consolidated assets will no longer be required to submit a resolution plan unless they have $75 billion or more in certain risk-based indicators. Under this final rule, KeyCorp will no longer be subject to resolution planning requirements.

On April 16, 2019, the FDIC issued an advance notice of proposed rulemaking ("ANPR") requesting public comment on potential changes to its rule imposing resolution planning requirements on large insured depository institutions, including potential modifications to the rule in the following areas: (i) creation of tiered resolution planning requirements based on institution size, complexity, and other factors; (ii) revisions to the frequency and required content of plan submissions, including elimination of plan submissions for a category of smaller and less complex institutions; (iii) improvements to the process for periodic engagements between the FDIC and institutions on resolution-related matters; and (iv) revision of the $50 billion asset threshold in the current rule. The FDIC indicated that it is considering two alternate approaches with respect to the tiering of resolution plan requirements. Under each of these approaches, institutions would be placed into three groups with the first two groups required to submit resolution plans with streamlined content requirements and the third group not required to submit a resolution plan. The FDIC would engage with institutions in all three groups on a periodic basis on a limited number of items related to resolution planning and would conduct periodic testing of the resolution planning capabilities of these institutions. Comments on this ANPR were due by June 21, 2019. Any changes to this rule will impact KeyBank. The FDIC extended the due date for the next resolution plan submission for all institutions until after the rulemaking is completed.

Other Regulatory Developments

The Bank Secrecy Act

The BSA requires all financial institutions (including banks and securities broker-dealers) to, among other things, maintain a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism. It includes a variety of recordkeeping and reporting requirements (such as cash and suspicious activity reporting) as well as due diligence and know-your-customer documentation requirements. Key has established and maintains an anti-money laundering program to comply with the BSA's requirements.

Consumer Financial Protection Bureau

Title X of the Dodd-Frank Act created the CFPB, a consumer financial services regulator with supervisory authority over banks and their affiliates with assets of more than $10 billion, like Key, to carry out federal consumer protection laws. The CFPB also regulates financial products and services sold to consumers and has rulemaking authority with respect to federal consumer financial laws. Any new regulatory requirements promulgated by the CFPB or modifications in the interpretations of existing regulations could require changes to Key's consumer-facing businesses. The Dodd-Frank Act also gives the CFPB broad data collecting powers for fair lending for both small business and mortgage loans, as well as extensive authority to prevent unfair, deceptive and abusive practices.

Volcker Rule

The Volcker Rule implements Section 619 of the Dodd-Frank Act, which prohibits "banking entities," such as KeyCorp, KeyBank and their affiliates and subsidiaries, from owning, sponsoring, or having certain relationships with hedge funds and private equity funds (referred to as "covered funds") and engaging in short-term proprietary trading of financial instruments, including securities, derivatives, commodity futures and options on these instruments.

The Volcker Rule excepts certain transactions from the general prohibition against proprietary trading, including transactions in government securities (e.g., U.S. Treasuries or any instruments issued by the GNMA, FNMA, FHLMC, a Federal Home Loan Bank, or any state or a political division of any state, among others); transactions in connection with underwriting or market-making activities; and transactions as a fiduciary on behalf of customers. A banking entity may also engage in risk-mitigating hedging activity if it can demonstrate that the hedge reduces or mitigates a specific, identifiable risk or aggregate risk position of the entity. The banking entity is required to conduct an analysis supporting its hedging strategy and the effectiveness of the hedges must be monitored and, if necessary, adjusted on an ongoing basis.

Although the Volcker Rule became effective on April 1, 2014, the Federal Reserve exercised its unilateral authority to extend the compliance deadline until July 21, 2017, with respect to covered funds. In addition, on December 12, 2016, the Federal Reserve released additional guidelines regarding how banking entities may seek an extension of the conformance period for certain legacy covered fund investments. Under the Dodd-Frank Act, the Federal Reserve is authorized to provide a banking entity up to an additional five years to conform legacy investments (i.e., contractual commitments of a banking organization on or before May 1, 2010, to make an investment) in "illiquid" covered funds.

Key does not anticipate that the proprietary trading restrictions in the Volcker Rule will have a material impact on its business, but it may be required to divest certain fund investments as discussed in more detail in Note 6 ("Fair Value Measurements") in Item 8 of this report. On January 13, 2017, Key filed for an additional extension for illiquid funds, to retain certain indirect investments until the earlier of the date on which the investments are conformed or are expected to mature or July 21, 2022. The application for an extension was approved on February 14, 2017. As of December 31, 2019, we have not committed to a plan to sell these investments. Therefore, these investments continue to be valued using the net asset value per share methodology.

On October 8, 2019, five federal agencies announced their adoption of a final rule to simplify and tailor requirements relating to the Volcker Rule. Among other things, the final rule (i) revises the definition of certain terms relevant in determining the scope of the Volcker Rule; (ii) modifies the eligibility criteria for a banking entity to be able to rely on certain exemptions and exclusions from the proprietary trading and covered fund prohibitions; (iii) adds additional proprietary trading exclusions; and (iv) tailors the rule's compliance requirements based on the size of a firm's trading assets and liabilities. Under the final rule, a banking entity is subject to the most stringent compliance requirements if it has "significant" trading assets and liabilities, that is, total consolidated trading assets and liabilities of at least $20 billion. A banking entity with total consolidated trading assets and liabilities between $1 billion and $20 billion is regarded as having "moderate" trading assets and liabilities and is subject to a requirement to have a simplified compliance program that must be appropriate given that banking entity's activities, size, scope, and complexity. A presumption of compliance applies to a banking entity with "limited" trading assets and liabilities, that is, total consolidated trading assets and liabilities of less than $1 billion. The effective date of the final rule is January 1, 2020, and the compliance date is January 1, 2021. Key believes that it will be regarded as having "moderate" trading assets and liabilities as calculated under the final rule. We do not expect the final rule to have a material impact on Key.

On January 30, 2020, five federal agencies invited public comment on a proposal that is intended to clarify and streamline the covered fund-related provisions of the Volcker Rule. Among other things, the proposal would (i) permit certain low-risk transactions (including intraday credit and payment, clearing, and settlement transactions) between a banking entity and covered funds for which the banking entity serves as investment adviser, investment manager, or sponsor; (ii) clarify exclusions from the covered fund definition for foreign public funds, loan securitizations, and small business investment companies; and (iii) permit banking entities to invest in or sponsor certain types of funds that do not raise the concerns that the Volcker Rule was intended to address, such as credit funds, venture capital funds, customer facilitation funds, and family wealth management vehicles. Comments on this proposal are due by April 1, 2020.

Enhanced prudential standards and early remediation requirements

As enacted in 2010, the Dodd-Frank Act required the Federal Reserve to impose EPSs upon BHCs, like KeyCorp, with at least $50 billion in total consolidated assets. Prudential standards were required to include enhanced risk-based capital requirements and leverage limits, liquidity requirements, risk-management and risk committee requirements, resolution plan requirements, credit exposure report requirements, single counterparty credit limits ("SCCL"), supervisory and company-run stress test requirements and, for certain financial companies, a debt-to-equity limit. Early remediation requirements were required to include limits on capital distributions, acquisitions, and asset growth in early stages of financial decline and capital restoration plans, capital raising requirements, limits on transactions with affiliates, management changes, and asset sales in later stages of financial decline, which would be triggered by forward-looking indicators including regulatory capital and liquidity measures.

The resolution plan requirements were implemented by a joint final rule adopted by the Federal Reserve and FDIC in 2011 and were revised by a joint final rule adopted by the Federal Reserve and FDIC in 2019. In 2011, the Federal Reserve also issued a proposal to implement the stress test, early remediation, and SCCL requirements. However, when that proposal was adopted as a final rule in 2012, it included only the stress test requirements and not the SCCL or early remediation requirements.

In March 2014, the Federal Reserve published a final rule to implement certain of the EPSs required under the Dodd-Frank Act, including: (i) the incorporation of the Regulatory Capital Rules through the Federal Reserve's previously finalized rules on capital planning and stress tests; (ii) liquidity requirements; (iii) the risk management framework, the risk committee, and the chief risk officer as well as the corporate governance requirements as they relate to liquidity risk management; and (iv) a 15-to-1 debt-to-equity limit for companies that the FSOC determines pose a "grave threat" to U.S. financial stability. KeyCorp was required to comply with the final rule starting on January 1, 2015.

EGRRCPA, which was enacted on May 24, 2018, raised, from $50 billion to $250 billion, the asset threshold above which the Federal Reserve is required to apply EPSs to BHCs. EGRRCPA gave the Federal Reserve the authority, following notice and comment procedures, to continue to apply EPSs to any BHCs having at least $100 billion but less than $250 billion in total consolidated assets (like KeyCorp). Also, this statute requires the Federal Reserve to continue to conduct periodic stress tests of BHCs with assets between $100 billion and $250 billion (like KeyCorp), and the requirement for a publicly traded BHC to have a risk committee continues to apply if a BHC has assets of at least $50 billion.

On June 14, 2018, the Federal Reserve issued a final rule establishing SCCL requirements for BHCs with $250 billion or more in total consolidated assets. The final rule does not apply to KeyCorp. The Federal Reserve has taken no further action on the early remediation requirements proposed in 2011.

In one of the Tailoring Rules issued in October 2019 to implement EGRRCPA, the Federal Reserve amended certain of its rules governing EPSs to apply tailored regulatory standards to large BHCs in each of the four risk-based categories of institutions described in the Tailoring Rules. Based on Key's analysis of the Tailoring Rules, KeyCorp believes that it is a Category IV Firm, the least restrictive of these categories. The Tailoring Rules are discussed further under the headings "Regulatory capital requirements - liquidity requirements" and "Regulatory capital requirements - Capital planning and stress testing."

Bank transactions with affiliates

Federal banking law and regulation imposes qualitative standards and quantitative limitations upon certain transactions by a bank with its affiliates, including the bank's parent BHC and certain companies the parent BHC may be deemed to control for these purposes. Transactions covered by these provisions must be on arm's-length terms, and cannot exceed certain amounts that are determined with reference to the bank's regulatory capital. Moreover, if the transaction is a loan or other extension of credit, it must be secured by collateral in an amount and quality expressly prescribed by statute, and if the affiliate is unable to pledge sufficient collateral, the BHC may be required to provide it. These provisions significantly restrict the ability of KeyBank to fund its affiliates, including KeyCorp, KBCM, and KeyCorp's nonbanking subsidiaries engaged in making merchant banking investments (and certain companies in which these subsidiaries have invested).

Provisions added by the Dodd-Frank Act expanded the scope of: (i) the definition of affiliate to include any investment fund having any bank or BHC-affiliated company as an investment adviser; (ii) credit exposures subject to the prohibition on the acceptance of low-quality assets or securities issued by an affiliate as collateral, the quantitative limits, and the collateralization requirements to now include credit exposures arising out of derivative, repurchase agreement, and securities lending/borrowing transactions; and (iii) transactions subject to quantitative limits to now also include credit collateralized by affiliate-issued debt obligations that are not securities. In addition, these provisions require that a credit extension to an affiliate remain secured in accordance with the collateral requirements at all times that it is outstanding, rather than the previous requirement of only at the inception or upon material modification of the transaction. These provisions also raise significantly the procedural and substantive hurdles required to obtain a regulatory exemption from the affiliate transaction requirements. While these provisions became effective on July 21, 2012, the Federal Reserve has not yet issued a proposed rule to implement them.

Supervision and governance

On November 2, 2018, the Federal Reserve announced that it is adopting a new supervisory rating system for large financial institutions, including BHCs with total consolidated assets of $100 billion or more (like KeyCorp) ("LFI Rating System"), in order to align the Federal Reserve's rating system with the post-crisis supervisory programs for these firms. The LFI Rating System will provide a supervisory evaluation of whether an institution possesses sufficient operational strength and resilience to maintain safe and sound operations through a range of conditions and will assess an institution's capital planning and positions, liquidity risk management and positions, and governance and controls. Institutions subject to the LFI Rating System will be rated using the following scale: Broadly Meets Expectations, Conditionally Meets Expectations, Deficient-1, and Deficient-2, with the Conditionally Meets Expectations rating intended to be used as a transitory rating to allow an institution time to remediate a concern identified during the supervisory evaluation. The Federal Reserve assigned initial ratings under the LFI

Rating System in 2019 to institutions that are subject to the Large Institution Supervision Coordinating Committee framework (excluding KeyCorp) and intends to assign initial ratings in 2020 for all other large financial institutions subject to this rating system (including KeyCorp).

The governance and controls component of the LFI Rating System is the subject of two separate, but related proposals: (i) proposed guidance regarding supervisory expectations for boards of directors of large financial institutions; and (ii) proposed guidance regarding core principles for effective senior management, business management, and independent risk management and controls for large financial institutions. The proposed guidance regarding supervisory expectations for boards of directors (published by the Federal Reserve on August 3, 2017) identifies the attributes of effective boards of directors that would be used by an examiner to evaluate an institution's governance and controls. The proposal also clarifies that for all institutions supervised by the Federal Reserve, most supervisory findings should be communicated to the organization's senior management for corrective action and not its board of directors. In addition, the proposal identifies existing supervisory expectations for boards of directors set forth in Federal Reserve Supervision and Regulation Letters that could be eliminated or revised. The Federal Reserve extended the comment period for the proposed guidance regarding supervisory expectations for boards of directors until February 15, 2018.

On January 4, 2018, the Federal Reserve released the final proposal related to the LFI Rating System - the proposed guidance regarding core principles for effective senior management, business management, and independent risk management and controls for large financial institutions. This guidance would support the supervisory evaluation under the governance and controls component of the LFI Rating System, together with the above-mentioned guidance regarding the effectiveness of a firm's board of directors. In general, the guidance proposes core principles for effective senior management, business line management, and the independent risk management and control function. The guidance encourages firms to establish a governance structure with appropriate levels of independence and stature, by appointing a Chief Risk Officer and a Chief Audit Officer. Finally, the guidance emphasizes the importance of independent risk management, internal controls, and internal audit, and establishes principles that firms should use to establish or augment those management and control frameworks. Comments on this proposal were due by March 15, 2018.

Community Reinvestment Act

The Community Reinvestment Act ("CRA") was enacted in 1977 to encourage depository institutions to help meet the credit needs of the communities that they serve, including low- and moderate-income ("LMI") neighborhoods, consistent with the institutions' safe and sound operations. The CRA requires the federal banking agencies to assess the record of each institution that they supervise in meeting the credit needs of its entire community, including LMI neighborhoods.

On December 12, 2019, the OCC and the FDIC requested public comment on a proposal to revise the agencies' CRA regulations to modernize the framework by which the OCC and the FDIC assess a bank's CRA performance. The agencies stated that they were doing so in order to make the regulatory framework more objective, transparent, consistent, and easy to understand and thereby better achieve the statutory purpose of encouraging banks to serve their communities. The proposal would (i) clarify and expand which activities qualify for CRA credit; (ii) update the definition of the areas where activities count for CRA credit; (iii) create a more transparent and objective method for measuring CRA performance; and (iv) provide for more transparent, consistent, and timely CRA-related data collection, recordkeeping, and reporting. The proposal was published in the Federal Register on January 9, 2020. Comments are due by April 8, 2020. Any revision of the OCC's CRA regulations would apply to national banks, including KeyBank.

Control standards

On January 30, 2020, the Federal Reserve adopted a final rule setting forth a new, comprehensive framework for determining control under the BHCA and the Home Owners' Loan Act. The final rule simplifies and provides greater transparency regarding the standards used by the Federal Reserve to determine whether one company has control over another company. The final rule codifies existing Federal Reserve precedents on control and makes certain targeted adjustments to these precedents. The final rule provides a tiered framework that looks at the size of an investing company's voting and total equity investment in another company along with a variety of other factors, including board representation, officer and employee interlocks, and the existence of business relationships between the companies. By providing greater clarity regarding the standards that will be applied for control determinations, the final rule may facilitate (i) BHCs making minority investments in nonbank companies; and (ii) nonbank investors taking minority stakes in banking organizations.

ITEM 1A. RISK FACTORS

As a financial services organization, we are subject to a number of risks inherent in our transactions and present in the business decisions we make. Described below are the primary risks and uncertainties that if realized could have a material and adverse effect on our business, financial condition, results of operations or cash flows, and our access to liquidity. The risks and uncertainties described below are not the only risks we face.

Our ERM program incorporates risk management throughout our organization to identify, understand, and manage the risks presented by our business activities. Our ERM program identifies Key's major risk categories as: credit risk, compliance risk, operational risk, liquidity risk, market risk, reputation risk, strategic risk, and model risk. These risk factors, and other risks we may face, are discussed in more detail in other sections of this report.

I. Credit Risk

We have concentrated credit exposure in commercial and industrial loans, commercial real estate loans, and commercial leases.

As of December 31, 2019, approximately 72% of our loan portfolio consisted of commercial and industrial loans, commercial real estate loans, including commercial mortgage and construction loans, and commercial leases. These types of loans are typically larger than residential real estate loans and consumer loans and have a different risk profile. The deterioration of a larger loan or a group of these loans could cause a significant increase in nonperforming loans, which could result in a net loss of earnings from these loans, an increase in the provision for loan and lease losses, and an increase in loan charge-offs.

Should the fundamentals of the commercial real estate market deteriorate, our financial condition and results of operations could be adversely affected.

The strong recovery in commercial real estate over the past several years, in particular the multifamily property sector, has contributed to a surge in investment and development activity. As a result, property values are elevated and oversupply is a concern in certain markets. Substantial deterioration in property market fundamentals could have an impact on our portfolio, with a large portion of our clients active in real estate and specifically multifamily real estate. A correction in the real estate markets could impact the ability of borrowers to make debt service payments on loans. A portion of our commercial real estate loans are construction loans. Typically these properties are not fully leased at loan origination; the borrower may require additional leasing through the life of the loan to provide cash flow to support debt service payments. If property market fundamentals deteriorate sharply, the execution of new leases could slow, compromising the borrower's ability to cover the debt service payments.

We are subject to the risk of defaults by our loan counterparties and clients.

Many of our routine transactions expose us to credit risk in the event of default of our counterparty or client. Our credit risk may be exacerbated when the collateral held cannot be realized upon or is liquidated at prices insufficient to recover the full amount of the loan or derivative exposure due to us. In deciding whether to extend credit or enter into other transactions, we may rely on information furnished by or on behalf of counterparties and clients, including financial statements, credit reports and other information. We may also rely on representations of those counterparties, clients, or other third parties as to the accuracy and completeness of that information. The inaccuracy of that information or those representations affects our ability to accurately evaluate the default risk of a counterparty or client. Given the Dodd-Frank legislative mandate to centrally clear eligible derivative contracts, we rely on central clearing counterparties to remain open and operationally viable at all times. The possibility of a large member failure or a cybersecurity breach could result in a disruption in this market.

Various factors may cause our allowance for loan and lease losses to increase.

We maintain an ALLL (a reserve established through a provision for loan and lease losses charged to expense) that represents our estimate of losses based on our evaluation of risks within our existing portfolio of loans. The level of the allowance at December 31, 2019 reflects our ongoing evaluation of industry concentrations; specific credit risks; loan and lease loss experience; current loan portfolio quality; present economic, political and regulatory conditions; and incurred losses inherent in the current loan portfolio. The determination of the appropriate level of the ALLL inherently involves a degree of subjectivity and requires that we make significant estimates of current credit risks and current trends, all of which may undergo material changes.

As described in Note 1 ("Summary of Significant Accounting Policies"), on January 1, 2020, we adopted ASC 326, *Financial Instruments-Credit Losses,* and as such, in determining the ALLL under CECL, we must estimate expected lifetime credit losses based on information about past events, current conditions, and reasonable and supportable forecasts of future economic conditions. Changes in economic conditions affecting borrowers, the softening of certain macroeconomic variables that we are more susceptible to, such as GDP, unemployment, corporate bond rates, household income, 30 year mortgage rates and real estate values, along with new information regarding existing loans, identification of additional problem loans and other factors, both within and outside of our control, may indicate the need for an increase in the ALLL.

Declining asset prices could adversely affect us.

During the Great Recession, the volatility and disruption that the capital and credit markets experienced reached extreme levels. This severe market disruption led to the failure of several substantial financial institutions, which caused the credit markets to constrict and also caused a widespread liquidation of assets. These asset sales, along with asset sales by other leveraged investors, including some hedge funds, rapidly drove down prices and valuations across a wide variety of traded asset classes. Asset price deterioration has a negative effect on the valuation of certain of the asset categories represented on our balance sheet and reduces our ability to sell assets at prices we deem acceptable. Although the recovery has been in place for some time, a new recession would likely reverse recent positive trends in asset prices.

II. Compliance Risk

We are subject to extensive government regulation, supervision, and tax legislation.

As a financial services institution, we are subject to extensive federal and state regulation, supervision, and tax legislation. Banking regulations are primarily intended to protect depositors' funds, the DIF, consumers, taxpayers, and the banking system as a whole, not our debtholders or shareholders. These regulations increase our costs and affect our lending practices, capital structure, investment practices, dividend policy, ability to repurchase our common shares, and growth, among other things.

KeyBank and KeyCorp remain covered institutions under the Dodd-Frank Act's heightened prudential standards and regulations, including its provisions designed to protect consumers from financial abuse. Like similarly-situated institutions, Key undergoes routine scrutiny from bank supervisors in the examination process and is subject to enforcement of regulations at the federal and state levels, particularly with respect to consumer banking-related practices as well as compliance with AML, BSA and Office of Foreign Assets Control efforts. Federal rulemaking bodies continue to pass new, or modifications to, significant regulations with upcoming effective dates. There has also been an increase in state legislative activity, particularly in areas such as student lending and privacy. As new privacy-related laws and regulations, such as the California Consumer Privacy Act, are implemented in jurisdictions in which KeyBank operates, the time and resources needed for us to comply with such laws and regulations, as well as our potential liability for noncompliance and reporting obligations in the case of data breaches, may significantly increase. Compliance with these laws and regulations may require us to change our policies, procedures, and technology for information security and segregation of data, which could, among other things, make us more vulnerable to operational failures, and subject us to monetary penalties for breach of such laws and regulations. As a result, some uncertainty remains as to the aggregate impact upon Key of significant regulations.

Changes to existing statutes and regulations, and taxes (including industry-specific taxes and surcharges), or their interpretation or implementation could affect us in substantial and unpredictable ways. These changes may subject us to additional costs and increase our litigation risk should we fail to appropriately comply. Such changes may also impact consumer behavior, limit the types of financial services and products we may offer, affect the investments we make, and change the manner in which we operate.

Certain federal regulations have been in existence for decades without modification to account for modern banking practices, such as digital delivery of products and services, which can create challenges in execution and in the examination process. Emerging technologies, such as cryptocurrencies, could limit KeyBank's ability to track the movement of funds. KeyBank's ability to comply with BSA/AML and other regulations is dependent on its ability to improve detection and reporting capabilities and reduce variation in control processes and oversight accountability.

Additionally, federal banking law grants substantial enforcement powers to federal banking regulators. This enforcement authority includes, among other things, the ability to assess civil money penalties, fines, or restitution, to issue cease and desist or removal orders, and to initiate injunctive actions against banking organizations and affiliated parties. These enforcement actions may be initiated for violations of laws and regulations, for practices determined to be unsafe or unsound, or for practices or acts that are determined to be unfair, deceptive, or abusive. Failure to comply with these and other regulations, and supervisory expectations related thereto, may result in fines, penalties, lawsuits, regulatory sanctions, reputational damage, or restrictions on our business.

For more information, see "Supervision and Regulation" in Item 1 of this report.

Changes in accounting policies, standards, and interpretations could materially affect how we report our financial condition and results of operations.

The FASB periodically changes the financial accounting and reporting standards governing the preparation of Key's financial statements. Additionally, those bodies that establish and/or interpret the financial accounting and reporting standards (such as the FASB, SEC, and banking regulators) may change prior interpretations or positions on how these standards should be applied. These changes can be difficult to predict and can materially affect how Key records and reports its financial condition and results of operations. In some cases, Key could be required to retroactively apply a new or revised standard, resulting in changes to previously reported financial results.

III. Operational Risk

We are subject to a variety of operational risks.

In addition to the other risks discussed in this section, we are subject to operational risk, which represents the risk of loss resulting from human error, inadequate or failed internal processes, internal controls, systems, and external events. Operational risk includes the risk of fraud by employees, clerical and record-keeping errors, nonperformance by vendors, threats from cyber activity, and computer/telecommunications malfunctions. Fraudulent activity has escalated, become more sophisticated, and is ever evolving as there are more options to access financial services. For instance, in our Form 8-K filed July 16, 2019, we disclosed that on or about July 9, 2019, we discovered fraudulent activity associated with transactions conducted in the third quarter of 2019 by a business customer of KeyBank. This fraudulent activity resulted in $139 million of net loan charge-offs in 2019. Operational risk also encompasses compliance and legal risk, which is the risk of loss from violations of, or noncompliance with, laws, rules, regulations, prescribed practices, or ethical standards, as well as the risk of our noncompliance with contractual and other obligations. We are also exposed to operational risk through our outsourcing arrangements, and the effect that changes in circumstances or capabilities of our outsourcing vendors can have on our ability to continue to perform operational functions necessary to our business, such as certain loan processing functions. For example, breakdowns or failures of our vendors' systems or employees could be a source of operational risk to us. Resulting losses from operational risk could take the form of explicit charges, increased operational costs (including remediation costs), harm to our reputation, inability to secure insurance, litigation, regulatory intervention or sanctions, or foregone business opportunities.

Our information systems may experience an interruption or breach in security.

We rely heavily on communications, information systems (both internal and provided by third parties), and the internet to conduct our business. Our business is dependent on our ability to process and monitor large numbers of daily transactions in compliance with legal, regulatory, and internal standards and specifications. In addition, a significant portion of our operations relies heavily on the secure processing, storage, and transmission of personal and confidential information, such as the personal information of our customers and clients. These risks may increase in the future as we continue to increase mobile payments and other internet-based product offerings, expand our internal usage of web/cloud-based products and applications, and maintain and develop new relationships with third and fourth party providers. In addition, our ability to extend protections to customers' information to individual customer devices is limited, especially if the customers willingly provide third parties access to their devices or information.

In the event of a failure, interruption, or breach of our information systems or that of a third party that provides services to us or our customers, we may be unable to avoid impact to our customers. Such a failure, interruption, or breach could result in legal liability, remediation costs, regulatory action, or reputational harm. Other U.S. financial service institutions and companies have reported breaches, some severe, in the security of their websites or other systems and several financial institutions, including Key, experienced significant distributed denial-of-service attacks, some of which involved sophisticated and targeted attacks intended to disable or degrade service, or sabotage systems. Other attacks have attempted to obtain unauthorized access to confidential information, hold for ransom, or alter or destroy data, often through the introduction of computer viruses or malware, phishing, cyberattacks, credential stuffing, and other means. To the extent that we use third parties to provide services to our clients, we seek to minimize the risk by performing due diligence and monitoring the third party, but we cannot control all of the risks at these third parties. Should an adverse event affecting another company's systems occur, we may not have indemnification or other protection from the other company sufficient to fully compensate us or otherwise protect us or our clients from the consequences.

In addition, our customers routinely use Key-issued credit and debit cards to pay for transactions conducted with businesses in person and over the internet. If the business's systems that process or store debit or credit card information experience a security breach, our card holders may experience fraud on their card accounts. We may suffer losses associated with such fraudulent transactions, as well as for other costs, such as replacing impacted cards. Key also provides card transaction processing services to some merchant customers under agreements we have with payment networks such as Mastercard. Under these agreements, we may be responsible for certain losses and penalties if one of our merchant customers suffers a data breach.

We also face risks related to the increasing interdependence and interconnectivity of financial entities and technology systems. A technology failure, cyberattack or other security breach that significantly compromises the systems of one or more financial parties or service providers could have a material impact on counterparties or market participants, including us. Any third-party technology failure, cyberattack, or security breach could adversely affect our ability to effect transactions, service clients, or otherwise operate our business.

To date, none of these efforts have had a material adverse effect on our business or operations or resulted in any material disruption of our operations or material harm to our customers. Such security attacks can originate from a wide variety of sources/malicious actors, including, but not limited to, persons who constitute an insider threat, who are involved with organized crime, or who may be linked to terrorist organizations or hostile foreign governments. Those same parties may also attempt to fraudulently induce employees, customers, or other users of our systems to disclose sensitive information in order to gain access to our data or that of our customers or clients through social engineering, phishing, and other methods. Our security systems may not be able to protect our information systems from similar attacks due to the rapid evolution and creation of sophisticated cyberattacks. We are also subject to the risk that a malicious actor or our employees may intercept and/or transmit or otherwise misuse unauthorized confidential or proprietary information. An interception, misuse, or mishandling of personal, confidential, or proprietary information being sent to or received from a customer or third party could result in legal liability, remediation costs, regulatory action, and reputational harm. Over the last few years, several large companies have disclosed that they suffered substantial data security breaches, compromising millions of user accounts and credentials. To date, our losses and costs related to these breaches have not been material, but other similar events in the future could have a significant impact on us.

We have incurred and will continue to incur significant expense in an effort to improve the reliability of our systems and their security against external and internal threats. Nonetheless, there remains the risk that one or more adverse events might occur. If one does occur, we might not be able to remediate the event or its consequences timely or adequately.

We rely on third parties to perform significant operational services for us.

Third parties perform significant operational services on our behalf. Additionally, some of our third parties outsource aspects of their operations to other third parties (commonly referred to as "fourth parties"). These parties are subject to similar risks as Key relating to cybersecurity and breakdowns or failures of their own systems, internal processes and controls, or employees. One or more of these third parties may experience a cybersecurity event or operational disruption and, if any such event does occur, it may not be adequately addressed, either operationally or financially, by such third party. Certain of these third parties may have limited indemnification obligations or may not have the financial capacity to satisfy their indemnification obligations. Financial or operational difficulties of a third party could also impair our operations if those difficulties interfere with such third party's ability to serve us. Additionally, some of our outsourcing arrangements are located overseas and, therefore, are subject to risks unique to the regions in which they operate. If a critical third party is unable to meet our needs in a timely manner or if the services or products provided by such third party are terminated or otherwise delayed and if we are not able to identify or develop alternative sources for these services and products quickly and cost-effectively, it could have a material adverse effect on our business. Additionally, regulatory guidance adopted by federal banking regulators related to how banks select, engage, and manage their third parties affects the circumstances and conditions under which we work with third parties and the cost of managing such relationships.

We are subject to claims and litigation, which could result in significant financial liability and/or reputational risk.

From time to time, customers, vendors, or other parties may make claims and take legal action against us. We maintain reserves for certain claims when deemed appropriate based upon our assessment that a loss is probable, estimable, and consistent with applicable accounting guidance. At any given time we have a variety of legal actions asserted against us in various stages of litigation. Resolution of a legal action can often take years. Whether any particular claims and legal actions are founded or unfounded, if such claims and legal actions are not resolved in our favor, they may result in significant financial liability and adversely affect how the market perceives us and our products and services as well as impact customer demand for those products and services.

We are also involved, from time to time, in other reviews, investigations, and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding our business, including, among other things, accounting, compliance, and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, injunctions, or other relief. The number and risk of these investigations and proceedings has increased in recent years in the financial services industry due to legal changes to the consumer protection laws provided for by the Dodd-Frank Act and the creation of the CFPB.

There have also been a number of highly publicized legal claims against financial institutions involving fraud or misconduct by employees, and we run the risk that employee misconduct could occur. It is not always possible to deter or prevent employee misconduct, and the precautions we take to prevent and detect this activity may not be effective in all cases.

Our controls and procedures may fail or be circumvented, and our methods of reducing risk exposure may not be effective.

We regularly review and update our internal controls, disclosure controls and procedures, and corporate governance policies and procedures. We also maintain an ERM program designed to identify, measure, monitor, report, and analyze our risks. Additionally, our internal audit function provides an independent assessment and testing of Key's internal controls, policies, and procedures. Any system of controls and any system to reduce risk exposure, however well designed, operated, and tested, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. The systems may not work as intended or be circumvented by employees, third parties, or others outside of Key. Additionally, instruments, systems, and strategies used to hedge or otherwise manage exposure to various types of market compliance, credit, liquidity, operational, and business risks and enterprise-wide risk could be less effective than anticipated. As a result, we may not be able to effectively or fully mitigate our risk exposures in particular market environments or against particular types of risk.

Climate change, severe weather, global pandemics, natural disasters, acts of war or terrorism, and other external events could significantly impact our business.

Natural disasters, including severe weather events of increasing strength and frequency due to climate change, acts of war or terrorism, global pandemics, and other adverse external events could have a significant impact on our ability to conduct business or upon third parties who perform operational services for us. Such events could affect the stability of our deposit base, impair the ability of borrowers to repay outstanding loans, impair the value of collateral securing loans, cause significant property damage, result in lost revenue, or cause us to incur additional expenses.

Additionally, potential future shutdowns of portions of the Federal government could negatively impact the financial performance of certain customers and could negatively impact customers’ future access to certain loan and guaranty programs.

IV. Liquidity Risk

Capital and liquidity requirements imposed by the Dodd-Frank Act require banks and BHCs to maintain more and higher quality capital and more and higher quality liquid assets than has historically been the case.

Evolving capital standards resulting from the Dodd-Frank Act and the Regulatory Capital Rules adopted by our regulators have had and will continue to have a significant impact on banks and BHCs, including Key. For a detailed explanation of the capital and liquidity rules that became effective for us on a phased-in basis on January 1, 2015, see the section titled “Regulatory capital requirements” under the heading “Supervision and Regulation” in Item 1 of this report.

The Federal Reserve’s capital standards require Key to maintain more and higher quality capital and could limit our business activities (including lending) and our ability to expand organically or through acquisitions. They could also result in our taking steps to increase our capital that may be dilutive to shareholders or limit our ability to pay dividends or otherwise return capital to shareholders.

In addition, the liquidity standards require us to hold high-quality liquid assets, may require us to change our future mix of investment alternatives, and may impact future business relationships with certain customers. Additionally, support of liquidity standards may be satisfied through the use of term wholesale borrowings, which tend to have a higher cost than that of traditional core deposits.

Further, the Federal Reserve requires BHCs to obtain approval before making a “capital distribution,” such as paying or increasing dividends, implementing common stock repurchase programs, or redeeming or repurchasing capital instruments. The Federal Reserve has detailed the processes that BHCs should maintain to ensure they hold adequate capital under severely adverse conditions and have ready access to funding before engaging in any capital activities. These rules could limit Key’s ability to make distributions, including paying out dividends or buying back shares. For more information, see the section titled “Regulatory capital requirements” under the heading “Supervision and Regulation” in Item 1 of this report.

Recently, certain regulatory rule changes related to tailoring outlined in EGRRCPA have been finalized. While marginal relief from certain capital and liquidity standards has been afforded to Key (such as relief from LCR compliance), overall capital and liquidity management practices and expectations will remain unchanged for the foreseeable future. Moreover, Key does not anticipate significant changes to its overall liquidity and capital levels or composition as a result of the final rules. Finally, additional guidance and rule-making related to capital planning and stress testing have yet to be finalized and impacts resulting from these potential changes remain unknown.

Federal agencies’ actions to ensure stability of the U.S. financial system may have disruptive effects on us.

Since 2008, the federal government has taken unprecedented steps to provide stability to and confidence in the financial markets. For example, the Federal Reserve initiated a round of interest rate cuts designed to maintain economic expansion. In the future, federal agencies may no longer support such initiatives. The discontinuation of such initiatives may have unanticipated or unintended impacts, perhaps severe, on the financial markets. These effects could include higher debt yields, a flatter or steeper slope to the yield curve, or unanticipated changes to quality spread premiums that may not follow historical relationships or patterns. In addition, new initiatives or legislation may not be implemented, or, if implemented, may not be adequate to counter any negative effects of discontinuing programs or, in the event of an economic downturn, to support and stabilize the economy.

We rely on dividends by our subsidiaries for most of our funds.

We are a legal entity separate and distinct from our subsidiaries. With the exception of cash that we may raise from debt and equity issuances, we receive substantially all of our funding from dividends by our subsidiaries. Dividends by our subsidiaries are the principal source of funds for the dividends we pay on our common and preferred stock and interest and principal payments on our debt. Federal banking law and regulations limit the amount of dividends that KeyBank (KeyCorp's largest subsidiary) can pay. For further information on the regulatory restrictions on the payment of dividends by KeyBank, see "Supervision and Regulation" in Item 1 of this report.

In the event KeyBank is unable to pay dividends to us, we may not be able to service debt, pay obligations, or pay dividends on our common or preferred stock. Such a situation could result in Key losing access to alternative wholesale funding sources. In addition, our right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to the prior claims of the subsidiary's creditors.

We are subject to liquidity risk, which could negatively affect our funding levels.

Market conditions or other events could negatively affect our access to or the cost of funding, affecting our ongoing ability to accommodate liability maturities and deposit withdrawals, meet contractual obligations, or fund asset growth and new business initiatives at a reasonable cost, in a timely manner and without adverse consequences.
Although we maintain a liquid asset portfolio and have implemented strategies to maintain sufficient and diverse sources of funding to accommodate planned as well as unanticipated changes in assets, liabilities, and off-balance sheet commitments under various economic conditions (including a reduced level of wholesale funding sources), a substantial, unexpected, or prolonged change in the level or cost of liquidity could have a material adverse effect on us. If the cost effectiveness or the availability of supply in these credit markets is reduced for a prolonged period of time, our funding needs may require us to access funding and manage liquidity by other means. These alternatives may include generating client deposits, securitizing or selling loans, extending the maturity of wholesale borrowings, borrowing under certain secured borrowing arrangements, using relationships developed with a variety of fixed income investors, and further managing loan growth and investment opportunities. These alternative means of funding may result in an increase to the overall cost of funds and may not be available under stressed conditions, which would cause us to liquidate a portion of our liquid asset portfolio to meet any funding needs.

Our credit ratings affect our liquidity position.

The rating agencies regularly evaluate the securities issued by KeyCorp and KeyBank. The ratings of our long-term debt and other securities are based on a number of factors, including our financial strength, ability to generate earnings, and other factors. Some of these factors are not entirely within our control, such as conditions affecting the financial services industry and the economy and changes in rating methodologies. Changes in any of these factors could impact our ability to maintain our current credit ratings. A rating downgrade of the securities of KeyCorp or KeyBank could adversely affect our access to liquidity and could significantly increase our cost of funds, trigger additional collateral or funding requirements, and decrease the number of investors and counterparties willing to lend to us, reducing our ability to generate income.

V. Market Risk

A reversal of the U.S. economic recovery and volatile or recessionary conditions in the U.S. or abroad could negatively affect our business or our access to capital markets.

A worsening of economic and market conditions, downside shocks, or a return to recessionary economic conditions could result in adverse effects on Key and others in the financial services industry. The prolonged low-interest rate environment, despite a generally improving economy, has presented a challenge for the industry, including Key, and affects business and financial performance.

In particular, we could face some of the following risks, and other unforeseeable risks, in connection with a downturn in the economic and market environment or in the face of downside shocks or a recession, whether in the United States or internationally:

- A loss of confidence in the financial services industry and the debt and equity markets by investors, placing pressure on the price of Key's common shares or decreasing the credit or liquidity available to Key;
- A decrease in consumer and business confidence levels generally, decreasing credit usage and investment or increasing delinquencies and defaults;
- A decrease in household or corporate incomes, reducing demand for Key's products and services;
- A decrease in the value of collateral securing loans to Key's borrowers or a decrease in the quality of Key's loan portfolio, increasing loan charge-offs and reducing Key's net income;

- A decrease in our ability to liquidate positions at acceptable market prices;
- The extended continuation of the current low-interest rate environment, continuing or increasing downward pressure to our net interest income;
- An increase in competition or consolidation in the financial services industry;
- Increased concern over and scrutiny of the capital and liquidity levels of financial institutions generally, and those of our transaction counterparties specifically;
- A decrease in confidence in the creditworthiness of the United States or other governments whose securities we hold; and
- An increase in limitations on or the regulation of financial services companies like Key.

We are subject to interest rate risk, which could adversely affect net interest income.

Our earnings are largely dependent upon our net interest income. Net interest income is the difference between interest income earned on interest-earning assets such as loans and securities and interest expense paid on interest-bearing liabilities such as deposits and borrowed funds. Interest rates are highly sensitive to many factors that are beyond our control, including general economic conditions, the competitive environment within our markets, consumer preferences for specific loan and deposit products, and policies of various governmental and regulatory agencies, in particular, the Federal Reserve. Changes in monetary policy, including changes in interest rate controls being applied by the Federal Reserve, could influence the amount of interest we receive on loans and securities, the amount of interest we pay on deposits and borrowings, our ability to originate loans and obtain deposits, and the fair value of our financial assets and liabilities. If the Federal Reserve raises interest rates and begins to reverse quantitative easing, the behavior of national money market rate indices, the correlation of consumer deposit rates to financial market interest rates, and the setting of LIBOR rates may not follow historical relationships, which could influence net interest income and net interest margin.

Moreover, if the interest we pay on deposits and other borrowings increases at a faster rate than the interest we receive on loans and other investments, net interest income, and therefore our earnings, would be adversely affected. Conversely, earnings could also be adversely affected if the interest we receive on loans and other investments falls more quickly than the interest we pay on deposits and other borrowings.

Uncertainty surrounding the transition from LIBOR to an alternate reference rate may adversely affect our business.

On July 27, 2017, the Chief Executive of the United Kingdom Financial Conduct Authority (the “Authority”), which regulates LIBOR, announced that the Authority intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR to the administrator of LIBOR after 2021. A transition away from the widespread use of LIBOR to alternative rates is expected to occur before the end of 2021. Although no consensus exists at this time as to what benchmark rate or rates may become accepted alternatives to LIBOR, in the United States, the Alternative Reference Rates Committee of the Federal Reserve and the Federal Reserve Bank of New York started in May 2018 to publish the Secured Overnight Finance Rate (“SOFR”) as an alternative to U.S. dollar LIBOR. SOFR is a broad measure of the cost of borrowing cash overnight that is collateralized by U.S. treasury securities. While SOFR is currently considered a likely alternative to LIBOR, issues remain as to its implementation. Accordingly, whether SOFR will become an accepted alternative to LIBOR remains uncertain. At this time, it is not possible to predict the effect of the Authority’s announcement or other regulatory changes or announcements, any establishment of alternative reference rates, or any other reforms to LIBOR that may be enacted in the United Kingdom, the United States, or elsewhere. The uncertainty regarding the transition from LIBOR to another benchmark rate or rates could have adverse impacts on floating-rate obligations, loans, deposits, derivatives, and other financial instruments that currently use LIBOR as a benchmark rate and, ultimately, adversely affect KeyCorp’s financial condition and results of operations. The adverse impact could take various forms and is dependent upon certain factors outside of our control such as: timing of adoption by market forces of a new widely accepted LIBOR replacement, timing of LIBOR cessation, and counterparty acceptance of a new reference rate for both new and existing contracts, among others. Additionally, since LIBOR and any replacement reference rate may have significantly different attributes, it is difficult to predict the amount of increased costs associated with implementing the transition to a new reference rate, including costs relative to product changes, systems changes, compliance and operational oversight costs, and legal expenses, among others.

Our profitability depends upon economic conditions in the geographic regions where we have significant operations and on certain market segments in which we conduct significant business.

We have concentrations of loans and other business activities in geographic regions where our bank branches are located — Washington; Oregon/Alaska; Rocky Mountains; Indiana/Northwest Ohio/Michigan; Central/Southwest Ohio; East Ohio/Western Pennsylvania; Atlantic; Western New York; Eastern New York; and New England — and additional exposure to geographic regions outside of our branch footprint. Economic growth in the various regions where we operate has been uneven, and the health of the overall U.S. economy may differ from the economy of any particular geographic region. Adverse conditions in a geographic region such as inflation, unemployment, recession, natural disasters, or other factors beyond our control could impact the ability of borrowers in these regions to repay their loans, decrease the value of collateral securing loans made in these regions, or affect the ability of our customers in these regions to continue conducting business with us.

Additionally, a significant portion of our business activities are concentrated within the commercial real estate, healthcare, and utilities market segments. The profitability of some of these market segments depends upon the health of the overall economy, seasonality, the impact of regulation, and other factors that are beyond our control and may be beyond the control of our customers in these market segments.

An economic downturn in one or more geographic regions where we conduct our business, or any significant or prolonged impact on the profitability of one or more of the market segments with which we conduct significant business activity, could adversely affect the demand for our products and services, the ability of our customers to repay loans, the value of the collateral securing loans, and the stability of our deposit funding sources.

The soundness of other financial institutions could adversely affect us.

Our ability to engage in routine funding transactions could be adversely affected by the actions and commercial soundness of other financial institutions. We have exposure to many different industries and counterparties in the financial services industries, and we routinely execute transactions with such counterparties, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds, and other institutional clients. Financial services institutions are interrelated as a result of trading, clearing, counterparty, or other relationships. Defaults by one or more financial services institutions have led to, and may cause, market-wide liquidity problems and losses. Many of our transactions with other financial institutions expose us to credit risk in the event of default of a counterparty or client. In addition, our credit risk may be affected when the collateral held by us cannot be realized or is liquidated at prices not sufficient to recover the full amount of the loan or derivatives exposure due us.

VI. Reputation Risk

Damage to our reputation could significantly harm our businesses.

Our ability to attract and retain customers, clients, investors, and highly-skilled management and employees is affected by our reputation. Public perception of the financial services industry declined as a result of the Great Recession. We face increased public and regulatory scrutiny resulting from the financial crisis and economic downturn. Significant harm to our reputation can also arise from other sources, including employee misconduct, actual or perceived unethical behavior, litigation or regulatory outcomes, failing to deliver minimum or required standards of service and quality, compliance failures, disclosure of confidential information, significant or numerous failures, interruptions or breaches of our information systems, failure to meet external commitments and goals, including financial, and the activities of our clients, customers and counterparties, including vendors. Actions by the financial services industry generally or by certain members or individuals in the industry may have a significant adverse effect on our reputation. We could also suffer significant reputational harm if we fail to properly identify and manage potential conflicts of interest. Management of potential conflicts of interests is complex as we expand our business activities through more numerous transactions, obligations, and interests with and among our clients. The actual or perceived failure to adequately address conflicts of interest could affect the willingness of clients to deal with us, which could adversely affect our businesses.

VII. Strategic Risk

We may not realize the expected benefits of our strategic initiatives.

Our ability to compete depends on a number of factors, including, among others, our ability to develop and successfully execute our strategic plans and initiatives. Our strategic priorities include growing profitably and maintaining financial strength; effectively managing risk and reward; engaging a high-performing, talented, and diverse workforce; embracing the changes required by our clients and the marketplace; and acquiring, expanding, and retaining targeted client relationships. Our inability to execute on or achieve the anticipated outcomes of our strategic priorities may affect how the market perceives us and could impede our growth and profitability.

We operate in a highly competitive industry.

We face substantial competition in all areas of our operations from a variety of competitors, some of which are larger and may have more financial resources than us. Our competitors primarily include national and super-regional banks as well as smaller community banks within the various geographic regions in which we operate. We also face competition from many other types of financial institutions, including, without limitation, savings associations, credit unions, mortgage banking companies, finance companies, mutual funds, insurance companies, investment management firms, investment banking firms, broker-dealers and other local, regional, national, and global financial services firms. In addition, technology has lowered barriers to entry and made it possible for nonbanks, including large technology companies, to offer products and services traditionally provided by banks. We expect the competitive landscape of the financial services industry to become even more intense as a result of legislative, regulatory, structural, and technological changes.

Our ability to compete successfully depends on a number of factors, including: our ability to develop and execute strategic plans and initiatives; our ability to develop, maintain, and build long-term customer relationships based on quality service and competitive prices; our ability to develop competitive products and technologies demanded by our customers, while maintaining our high ethical standards and an effective compliance program and keeping our assets safe and sound; our ability to attract, retain, and develop a highly competent employee workforce; and industry and general economic trends. Increased competition in the financial services industry, or our failure to perform in any of these areas, could significantly weaken our competitive position, which could adversely affect our growth and profitability.

Maintaining or increasing our market share depends upon our ability to adapt our products and services to evolving industry standards and consumer preferences, while maintaining competitive prices.

The continuous, widespread adoption of new technologies, including internet services and mobile devices (such as smartphones and tablets), requires us to evaluate our product and service offerings to ensure they remain competitive. Our success depends, in part, on our ability to adapt our products and services, as well as our distribution of them, to evolving industry standards and consumer preferences. New technologies have altered consumer behavior by allowing consumers to complete transactions such as paying bills or transferring funds directly without the assistance of banks. New products allow consumers to maintain funds in brokerage accounts or mutual funds that would have historically been held as bank deposits. The process of eliminating banks as intermediaries, known as “disintermediation,” could result in the loss of fee income, as well as the loss of customer loans and deposits and related income generated from those products.

The increasing pressure from our competitors, both bank and nonbank, to keep pace and adopt new technologies and products and services requires us to incur substantial expense. We may be unsuccessful in developing or introducing new products and services, modifying our existing products and services, adapting to changing consumer preferences and spending and saving habits, achieving market acceptance or regulatory approval, sufficiently developing or maintaining a loyal customer base, or offering products and services at prices lower than the prices offered by our competitors. These risks may affect our ability to achieve growth in our market share and could reduce both our revenue streams from certain products and services and our revenues from our net interest income.

We may not be able to attract and retain skilled people.

Our success depends, in large part, on our ability to attract, retain, motivate, and develop key people. Competition for the best people in most of our business activities is ongoing and can be intense, and we may not be able to retain or hire the people we want or need to serve our customers. Additionally, the profile of some of the people we target has changed significantly, causing those with whom we compete for talent to also change and to include nonbanks and large technology companies. To attract and retain qualified employees, we must compensate these employees at market levels. Typically, those levels have caused employee compensation to be our greatest expense.

Our incentive compensation structure and sales practices are subject to review by our regulators, who may identify deficiencies in the structure of or issue additional guidance on our compensation practices, causing us to make changes that may affect our ability to offer competitive compensation to these individuals or that place us at a disadvantage to non-financial service competitors. Our ability to attract and retain talented employees may be affected by these developments or any new executive compensation limits and regulations.

Acquisitions or strategic partnerships may disrupt our business and dilute shareholder value.

Acquiring other banks, bank branches, or other businesses involves various risks commonly associated with acquisitions or partnerships, including exposure to unknown or contingent liabilities of the acquired company; diversion of our management’s time and attention; significant integration risk with respect to employees, accounting systems, and technology platforms; increased regulatory scrutiny; and, the possible loss of key employees and customers of the acquired company. We regularly evaluate merger and acquisition and strategic partnership opportunities and conduct due diligence activities related to possible transactions. As a result, mergers or acquisitions involving cash, debt or equity securities may occur at any time. Acquisitions may involve the payment of a premium over book and market values. Therefore, some dilution of our tangible book value and net income per common share could occur in connection with any future transaction.

VIII. Model Risk

We rely on quantitative models to manage certain accounting, risk management, capital planning, and treasury functions.

We use quantitative models to help manage certain aspects of our business and to assist with certain business decisions, including estimating incurred loan and lease losses, measuring the fair value of financial instruments when reliable market prices are unavailable, estimating the effects of changing interest rates and other market measures on our financial condition and results of operations, managing risk (such as setting reserves), and for capital planning purposes (including during the capital stress testing process). Our modeling methodologies rely on many assumptions, historical analyses, correlations, and being compatible to the available data. These assumptions have certain limitations and may be incorrect, particularly in times of market distress, and the historical correlations on which we rely may no longer be relevant. Additionally, as businesses and markets evolve, our measurements may not accurately reflect this evolution. Even if the underlying assumptions and historical correlations used in our models are adequate, our models may be deficient due to errors in computer code, use of bad data during development or input into the model during model use, or the use of a model for a purpose outside the scope of the model’s design.

As a result, our models may not fully capture or express the risks we face, may suggest that we have sufficient capital when we may not, or may lead us to misjudge the business and economic environment in which we will operate. If our models fail to produce reliable results on an ongoing basis, we may not make appropriate risk management, capital planning, or other business or financial decisions. Furthermore, strategies that we employ to manage and govern the risks associated with our use of models may not be effective or fully reliable, and as a result, we may realize losses or other lapses.

Banking regulators continue to focus on the models used by banks and bank holding companies in their businesses. The failure or inadequacy of a model may result in increased regulatory scrutiny on us or may result in an enforcement action or proceeding against us by one of our regulators.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The headquarters of KeyCorp and KeyBank are located in Key Tower at 127 Public Square, Cleveland, Ohio 44114-1306. At December 31, 2019, Key leased approximately 477,744 square feet of the complex, encompassing the first 12 floors and the 54th through 56th floors of the 57-story Key Tower. In addition, Key owned two buildings in Brooklyn, Ohio, with office space that it operated from and leased out totaling 563,458 square feet at December 31, 2019. Our office space is used by all of our segments. As of the same date, KeyBank owned 467 branches and leased 631 branches. The lease terms for applicable branches are not individually material, with terms ranging from month-to-month to 99 years from inception.

ITEM 3. LEGAL PROCEEDINGS

The information presented in the Legal Proceedings section of Note 22 ("Commitments, Contingent Liabilities, and Guarantees") of the Notes to Consolidated Financial Statements is incorporated herein by reference.

On at least a quarterly basis, we assess our liabilities and contingencies in connection with outstanding legal proceedings utilizing the latest information available. Where it is probable that we will incur a loss and the amount of the loss can be reasonably estimated, we record a liability in our consolidated financial statements. These legal reserves may be increased or decreased to reflect any relevant developments on a quarterly basis. Where a loss is not probable or the amount of the loss is not estimable, we have not accrued legal reserves, consistent with applicable accounting guidance. Based on information currently available to us, advice of counsel, and available insurance coverage, we believe that our established reserves are adequate and the liabilities arising from the legal proceedings will not have a material adverse effect on our consolidated financial condition. We note, however, that in light of the inherent uncertainty in legal proceedings there can be no assurance that the ultimate resolution will not exceed established reserves. As a result, the outcome of a particular matter or a combination of matters may be material to our results of operations for a particular period, depending upon the size of the loss or our income for that particular period.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

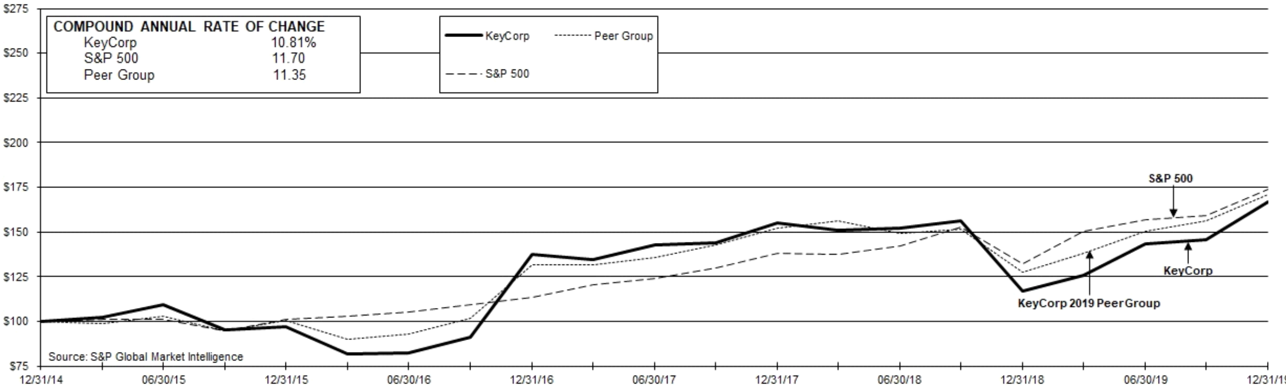
PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The following disclosures included in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and in the Notes to Consolidated Financial Statements contained in Item 8 of this report, are incorporated herein by reference:

	Page(s)
Discussion of our common shares, shareholder information, and repurchase activities in the section captioned "Capital — Common Shares outstanding"	62
Discussion of dividends in the section captioned "Capital — Dividends"	62

The following graph compares the price performance of our Common Shares (based on an initial investment of $100 on December 31, 2014, and assuming reinvestment of dividends) with that of the S&P 500 Index and a group of other banks that constitute our peer group. The peer group consists of the banks that make up the S&P 500 Regional Bank Index and the banks that make up the Standard & Poor's 500 Diversified Bank Index. We are included in the S&P 500 Index and the peer group.



(a) Share price performance is not necessarily indicative of future price performance.

From time to time, KeyCorp or its principal subsidiary, KeyBank, may seek to retire, repurchase, or exchange outstanding debt of KeyCorp or KeyBank, and capital securities or preferred stock of KeyCorp, through cash purchase, privately negotiated transactions, or otherwise. Such transactions, if any, depend on prevailing market conditions, our liquidity and capital requirements, contractual restrictions, and other factors. The amounts involved may be material. On October 21, 2019, KeyCorp redeemed for cash all of the outstanding $300 million aggregate principal amount of its 6.750% Senior Notes due 2020.

On April 18, 2019, we announced our 2019 capital plan. Share repurchases of up to $1.0 billion were included in the 2019 capital plan, which is effective from the third quarter of 2019 through the second quarter of 2020. During 2019, we repurchased $379 million of common shares under our 2018 capital plan authorization and $489 million under our 2019 capital plan authorization.

The following table summarizes our repurchases of our Common Shares for the three months ended December 31, 2019.

Calendar month	Total number of shares repurchased[(a)]	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Maximum number of shares that may yet be purchased as part of publicly announced plans or programs[(b)]
October 1 - 31	6,871,625	18.23	6,871,625	34,899,443
November 1 - 30	6,096,263	$ 19.05	6,096,263	26,353,864
December 1 - 31	566	19.21	566	25,246,568
Total	12,968,454	$ 18.61	12,968,454	

(a) Includes Common Shares repurchased in the open market.
(b) Calculated using the remaining general repurchase amount divided by the closing price of KeyCorp Common Shares as follows: on October 31, 2019, at $17.97; on November 29, 2019, at $19.39; and on December 31, 2019, at $20.24.

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ITEM 6. SELECTED FINANCIAL DATA

dollars in millions, except per share amounts	2019	2018	2017	2016	2015	Compound Annual Rate of Change (2015-2019)
YEAR ENDED DECEMBER 31,						
Interest income	**$ 5,235**	$ 4,878	$ 4,390	$ 3,319	$ 2,622	14.8%
Interest expense	**1,326**	969	613	400	274	37.1
Net interest income	**3,909**	3,909	3,777	2,919	2,348	10.7
Provision for credit losses	**445**	246	229	266	166	21.8
Noninterest income	**2,459**	2,515	2,478	2,071	1,880	5.5
Noninterest expense	**3,901**	3,975	4,098	3,756	2,840	6.6
Income (loss) from continuing operations before income taxes	**2,022**	2,203	1,928	968	1,222	10.6
Income (loss) from continuing operations attributable to Key	**1,708**	1,859	1,289	790	915	13.3
Income (loss) from discontinued operations, net of taxes	**9**	7	7	1	1	N/A
Net income (loss) attributable to Key	**1,717**	1,866	1,296	791	916	13.4
Income (loss) from continuing operations attributable to Key common shareholders	**1,611**	1,793	1,219	753	892	12.6
Income (loss) from discontinued operations, net of taxes	**9**	7	7	1	1	N/A
Net income (loss) attributable to Key common shareholders	**1,620**	1,800	1,226	754	893	12.7
PER COMMON SHARE						
Income (loss) from continuing operations attributable to Key common shareholders	**$ 1.62**	$ 1.72	$ 1.13	$ .81	$ 1.06	8.9
Income (loss) from discontinued operations, net of taxes	**.01**	.01	.01	—	—	N/A
Net income (loss) attributable to Key common shareholders [a]	**1.63**	1.73	1.14	.81	1.06	9.0
Income (loss) from continuing operations attributable to Key common shareholders — assuming dilution	**1.61**	1.70	1.12	.80	1.05	8.9
Income (loss) from discontinued operations, net of taxes — assuming dilution	**.01**	.01	.01	—	—	N/A
Net income (loss) attributable to Key common shareholders — assuming dilution [a]	**1.62**	1.71	1.13	.80	1.05	9.1
Cash dividends paid	**.71**	.565	.38	.33	.29	19.6
Book value at year end	**15.54**	13.90	13.09	12.58	12.51	4.4
Tangible book value at year end	**12.56**	11.14	10.35	9.99	11.22	2.3
Market price at year end	**20.24**	14.78	20.17	18.27	13.19	8.9
Dividend payout ratio	**43.6%**	32.7%	33.3%	40.7%	27.4%	N/A
Weighted-average common shares outstanding (000)	**992,091**	1,040,890	1,072,078	927,816	834,846	3.5
Weighted-average common shares and potential common shares outstanding (000) [b]	**1,002,254**	1,054,682	1,088,593	938,536	844,489	3.5
AT DECEMBER 31,						
Loans	**$ 94,646**	$ 89,552	$ 86,405	$ 86,038	$ 59,876	9.6%
Earning assets	**130,807**	125,803	123,490	121,966	83,780	9.3
Total assets	**144,988**	139,613	137,698	136,453	95,131	8.8
Deposits	**111,870**	107,309	105,235	104,087	71,046	9.5
Long-term debt	**12,448**	13,732	14,333	12,384	10,184	4.1
Key common shareholders’ equity	**15,138**	14,145	13,998	13,575	10,456	7.7
Key shareholders’ equity	**17,038**	15,595	15,023	15,240	10,746	9.7
PERFORMANCE RATIOS — FROM CONTINUING OPERATIONS						
Return on average total assets	**1.19%**	1.36%	.96%	.70%	.99%	N/A
Return on average common equity	**10.83**	12.88	8.65	6.26	8.63	N/A
Return on average tangible common equity [c]	**13.46**	16.22	10.84	7.39	9.64	N/A
Net interest margin (TE)	**3.04**	3.17	3.17	2.92	2.88	N/A
Cash efficiency ratio [c]	**59.6**	60.0	63.5	73.7	65.9	N/A
PERFORMANCE RATIOS — FROM CONSOLIDATED OPERATIONS						
Return on average total assets	**1.19%**	1.35%	.96%	.69%	.97%	N/A
Return on average common equity	**10.89**	12.93	8.70	6.27	8.64	N/A
Return on average tangible common equity [c]	**13.53**	16.28	10.90	7.40	9.65	N/A
Net interest margin (TE)	**3.03**	3.15	3.15	2.91	2.85	N/A
Loan to deposit [d]	**86.6**	85.6	84.4	85.2	87.8	N/A
CAPITAL RATIOS AT DECEMBER 31,						
Key shareholders’ equity to assets	**11.75%**	11.17%	10.91%	11.17%	11.30%	N/A
Key common shareholders’ equity to assets	**10.47**	10.15	10.17	9.95	10.99	N/A
Tangible common equity to tangible assets [c]	**8.64**	8.30	8.23	8.09	9.98	N/A
Common Equity Tier 1	**9.44**	9.93	10.16	9.54	10.94	N/A
Tier 1 risk-based capital	**10.86**	11.08	11.01	10.89	11.35	N/A
Total risk-based capital	**12.79**	12.89	12.92	12.85	12.97	N/A
Leverage	**9.88**	9.89	9.73	9.90	10.72	N/A
TRUST ASSETS						
Assets under management	**$ 40,833**	$ 36,775	$ 39,588	$ 36,592	$ 33,983	3.7%
OTHER DATA						

Average full-time-equivalent employees	**17,045**	18,180	18,415	15,700	13,483	4.8%
Branches	**1,098**	1,159	1,197	1,217	966	2.6

(a) EPS may not foot due to rounding.
(b) Assumes conversion of Common Share options and other stock awards and/or convertible preferred stock, as applicable.
(c) See the section entitled "GAAP to Non-GAAP Reconciliations," which presents the computations of certain financial measures related to "tangible common equity" and "cash efficiency." The section includes tables that reconcile the GAAP performance measures to the corresponding non-GAAP measures, which provides a basis for period-to-period comparisons.
(d) Represents period-end consolidated total loans and loans held for sale divided by period-end consolidated total deposits (excluding deposits in foreign office).

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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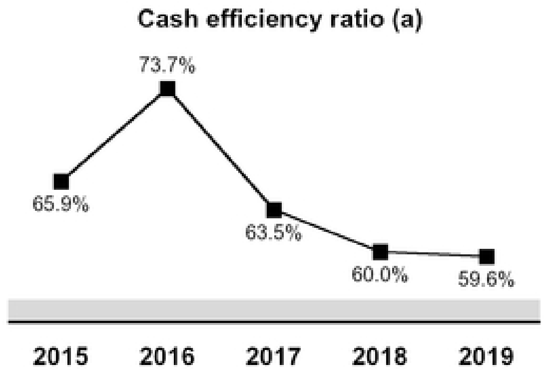
Introduction

This section reviews the financial condition and results of operations of KeyCorp and its subsidiaries for 2019 and 2018. Some tables include additional periods to comply with disclosure requirements or to illustrate trends in greater depth. When you read this discussion, you should also refer to the consolidated financial statements and related notes in this report. The page locations of specific sections that we refer to are presented in the table of contents. To review our financial condition and results of operations for 2017 and a comparison between the 2017 and 2018 results, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of our 2018 Form 10-K filed with the SEC on February 25, 2019.

Long-term financial targets

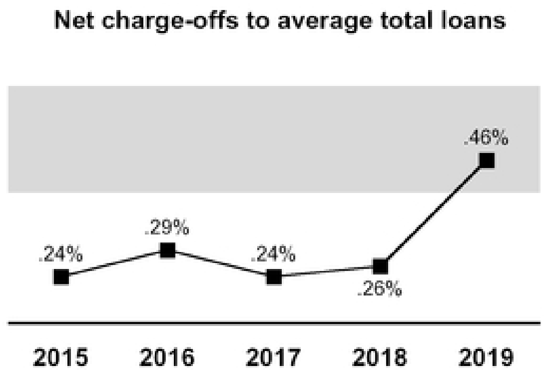


(a) See the section entitled "GAAP to non-GAAP Reconciliations," which presents the computations of certain financial measures related to "cash efficiency." The section includes tables that reconcile the GAAP performance measures to the corresponding non-GAAP measures, which provides a basis for period-to-period comparisons.

Positive Operating Leverage

Generate positive operating leverage and a cash efficiency ratio in the range of 54.0% to 56.0%.

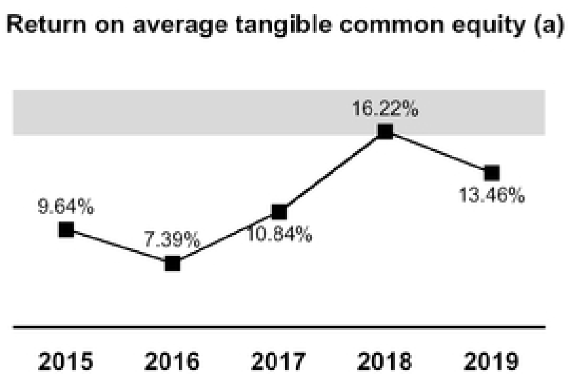
Full year expenses were down 1.9% from the prior year, as we completed our $200 million cost reduction program and drove further savings through our continuous improvement efforts. Overall, we have generated positive operating leverage over the past three years as our cash efficiency ratio has declined 390 basis points. We expect to make continued progress on our cash efficiency ratio during 2020 as we focus on expenses and strategically invest back into our business.



Moderate Risk Profile

Maintain a moderate risk profile by targeting a net loan charge-offs to average loans ratio in the range of .40% to .60% through a credit cycle.

During 2019, our net loan charge-offs to average loans ratio was impacted by $139 million of net loan charge-offs related to a previously disclosed fraud loss. Overall, credit quality remains strong as we continue to remain consistent and disciplined in our credit underwriting and portfolio management and are committed to maintaining our moderate risk profile.



(a) See the section entitled "GAAP to non-GAAP Reconciliations," which presents the computations of certain financial measures related to "tangible common equity." The section includes tables that reconcile the GAAP performance measures to the corresponding non-GAAP measures, which provides a basis for period-to-period comparisons.

Financial Return

A return on average tangible common equity in the range of 16.00% to 19.00%.

During 2019, our return on average tangible common equity ratio was impacted by the previously disclosed fraud loss of $106 million, after taxes. During 2019, we repurchased $868 million of Common Shares. Our full-year dividend for 2019 was $.71, a 26% increase from the previous year. In 2020, we remain committed to consistently delivering on our stated priorities of supporting organic growth, increasing dividends, and prudently repurchasing Common Shares.

Corporate strategy

We remain committed to enhancing long-term shareholder value by continuing to execute our relationship-based business model, growing our franchise, and being disciplined in our capital management. Our strategic focus is to deliver ease, value, and expertise to help our clients make better financial decisions and build enduring relationships. We intend to pursue this strategy by growing profitably; acquiring and expanding targeted client relationships; effectively managing risk and rewards; maintaining financial strength; and engaging, retaining, and inspiring our diverse and high-performing workforce. These strategic priorities for enhancing long-term shareholder value are described in more detail below.

- ***Grow profitably —*** We intend to continue to focus on generating positive operating leverage by growing revenue and creating a more efficient operating environment. We expect our relationship business model to keep generating organic growth as it helps us expand engagement with existing clients and attract new customers. We plan to leverage our continuous improvement culture to maintain an efficient cost structure that is aligned, sustainable, and consistent with the current operating environment and that supports our relationship business model.
- ***Acquire and expand targeted client relationships —*** We seek to be client-centric in our actions and have taken purposeful steps to enhance our ability to acquire and expand targeted relationships. We seek to provide solutions to serve our clients' needs. We focus on markets and clients where we can be the most relevant. In aligning our businesses and investments against these targeted client segments, we are able to make a meaningful impact for our clients.
- ***Effectively manage risk and rewards —*** Our risk management activities are focused on ensuring we properly identify, measure, and manage risks across the entire company to maintain safety and soundness and maximize profitability.
- ***Maintain financial strength —*** With the foundation of a strong balance sheet, we intend to remain focused on sustaining strong reserves, liquidity and capital. We plan to work closely with our Board and regulators to manage capital to support our clients' needs and drive long-term shareholder value. Our capital remains a competitive advantage for us.
- ***Engage a high-performing, talented, and diverse workforce —*** Every day our employees provide our clients with great ideas, extraordinary service, and smart solutions. We intend to continue to engage our high-performing, talented, and diverse workforce to create an environment where they can make a difference, own their careers, be respected, and feel a sense of pride.

Strategic developments

We took the following actions during 2019 in support of our corporate strategy:

- We continued to ***grow profitably*** during 2019. Our cash efficiency ratio improved to 59.6% and we achieved our seventh consecutive year of positive operating leverage. Full year expenses were down 1.9% from the prior year as we completed our $200 million cost reduction program. Revenue was slightly down for the year, reflecting the impact of lower interest rates. We continued to see strong balance sheet growth as average loans were up 3.6% and average deposits were up 4.7% compared to the prior year. Our relationship-based business model continues to position us well with our targeted clients, which results in new and expanded relationships.
- We acquired Laurel Road in April of 2019, which originated $1.8 billion of consumer direct loans during the year, well above our original expectations. These high quality loans provide us with an opportunity to build a broader digital relationship with our clients. Our residential mortgage business is another area where we are seeing strong returns on our investments. Residential mortgage loan originations for 2019 were $4.3 billion, up over 120% from 2018, with $1.5 billion originated in the fourth quarter of 2019. These two investments highlight our commitment to ***acquire and expand targeted client relationships***.
- During 2019, our net loan charge-offs to average loans ratio was impacted by a previously disclosed fraud loss. Our provision for credit losses and net loan charge-offs include $139 million related to the fraud loss. Overall, credit quality remains strong as our new loan originations in both our commercial and consumer book continue to meet our criteria for high quality loans as we continue to ***effectively manage risk and rewards.***
- ***Maintaining financial strength*** while driving long-term shareholder value was again a focus during 2019. At December 31, 2019, our Common Equity Tier 1 and Tier 1 risk-based capital ratios stood at 9.44% and 10.86%, respectively. During 2019, we repurchased $379 million of Common Shares under our 2018 capital plan authorization and $489 million under our 2019 capital plan authorization. Our full-year dividend for 2019 was $.71, a 26% increase from the previous year.

- We remained committed to our strategy to ***engage a high-performing, talented, and diverse workforce.*** In 2019, we were recognized by multiple organizations for our dedication to creating an environment where employees are treated with respect and empowered to bring their authentic selves to work. Some of these awards and recognitions included the Human Rights Campaign naming us one of the Best Places to Work for LGBT Equality, G.I. Jobs and Military Spouse Magazine recognizing us as a Military Friendly® and Military Friendly® Spouse Employer, and receiving the Leading Disability Employer Seal from the National Organization on Disability. We were also named to DiversityInc's 2019 Top 50 Companies for Diversity.

CEO Transition

On September 19, 2019, we announced that Beth Mooney will retire as Chairman and Chief Executive Officer of KeyCorp, effective May 1, 2020. Our Board has appointed Christopher Gorman as President and Chief Operating Officer. The Board has also appointed Mr. Gorman to the Board for a term expiring at our 2020 Annual Meeting of Shareholders. Mr. Gorman will succeed Ms. Mooney as Chairman and Chief Executive Officer on May 1, 2020. Mr. Gorman's appointment is in keeping with the Board's succession management process and will ensure a seamless leadership transition.

LIBOR Transition

As disclosed in Item 1A. Risk Factors of this report, LIBOR in its current form is not expected to be available after 2021. The most likely replacement rate is expected to be SOFR, which has been recommended by the ARRC. The Federal Reserve has encouraged financial institutions not to wait for the end of 2021 to make the transition away from LIBOR. We have established an enterprise wide program to identify and address all LIBOR transition issues. The goals of the LIBOR transition program are to:

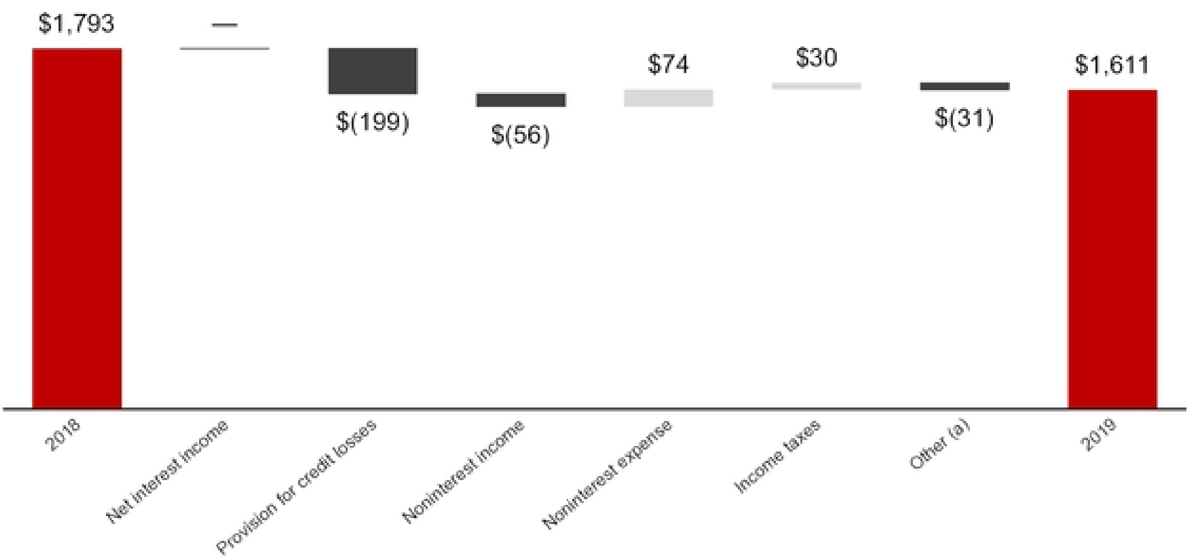
- Identify and analyze LIBOR-based exposure and develop and execute transition strategies;
- Review and update near-term strategies and actions for our current LIBOR-based business currently being written;
- Assess financial impact and risk while planning and executing mitigation actions;
- Understand and strategically address the current market approach to LIBOR and SOFR; and
- Determine and execute system and process work to be operationally ready for SOFR.

We are also collaborating closely with regulators and industry groups on the transition. We also expect to leverage recommendations made by the ARRC and ISDA that are tailored to our specific client segments.

Results of Operations

Earnings Overview

The following chart provides a reconciliation of net income from continuing operations attributable to Key common shareholders for the year ended December 31, 2018, to the year ended December 31, 2019 (dollars in millions):



(a) Includes Net income (loss) attributable to noncontrolling interest and Preferred dividends.

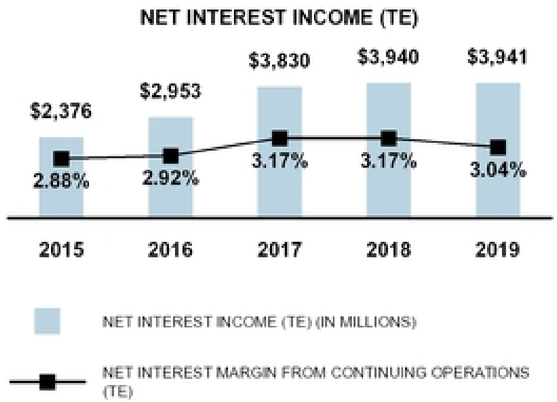
Net interest income

One of our principal sources of revenue is net interest income. Net interest income is the difference between interest income received on earning assets (such as loans and securities) and loan-related fee income, and interest expense paid on deposits and borrowings. There are several factors that affect net interest income, including:

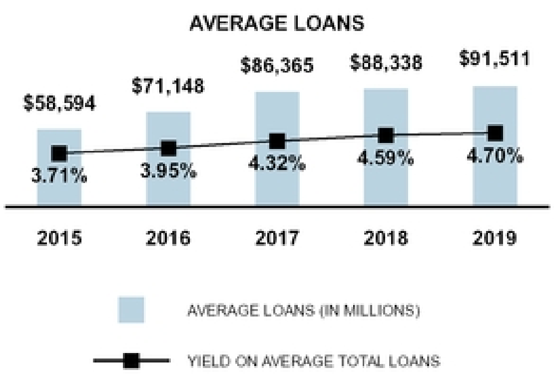
- the volume, pricing, mix, and maturity of earning assets and interest-bearing liabilities;
- the volume and value of net free funds, such as noninterest-bearing deposits and equity capital;
- the use of derivative instruments to manage interest rate risk;
- interest rate fluctuations and competitive conditions within the marketplace;
- asset quality; and
- fair value accounting of acquired earning assets and interest-bearing liabilities.

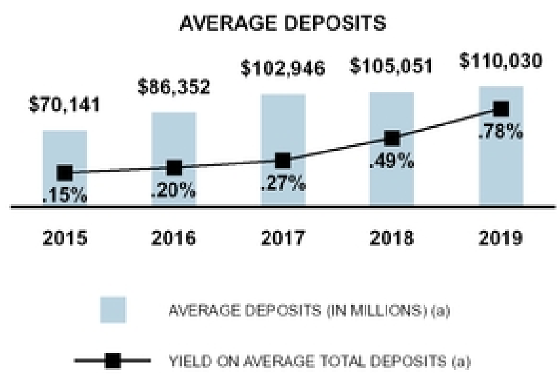
To make it easier to compare both the results among several periods and the yields on various types of earning assets (some taxable, some not), we present net interest income in this discussion on a “TE basis” (i.e., as if all income were taxable and at the same rate). For example, $100 of tax-exempt income would be presented as $126, an amount that, if taxed at the statutory federal income tax rate of 21%, would yield $100. Prior to 2018, $100 of tax-exempt income would be presented as $154, an amount that, if taxed at the previous statutory federal income tax rate of 35%, would yield $100.

Figure 1 shows the various components of our balance sheet that affect interest income and expense, and their respective yields or rates over the past five years. This figure also presents a reconciliation of TE net interest income to net interest income reported in accordance with GAAP for each of those years. The net interest margin, which is an indicator of the profitability of our earning assets less the cost of funding, is calculated by dividing taxable-equivalent net interest income by average earning assets.



TE net interest income for 2019 was $3.9 billion, and the net interest margin was 3.04%, compared to TE net interest income of $3.9 billion and a net interest margin of 3.17% for the prior year. Net interest income for 2019 reflects an increase in earning asset balances, partially offset by a decline in loan fees and a lower net interest margin. Additionally, purchase accounting accretion declined $38 million. The net interest margin was impacted by a lag in deposit pricing as interest rates moved lower during the second half of 2019. In 2020, we expect TE net interest income to be up 1% to 3% compared to 2019 and the net interest margin to be relatively stable compared to the fourth quarter of 2019.





(a) Average deposits for the year ended December 31, 2015, exclude deposits in foreign office.

Average loans totaled $91.5 billion for 2019, compared to $88.3 billion in 2018. Commercial loans increased $2.1 billion, reflecting broad-based growth in commercial and industrial loans, partially offset by declines in commercial mortgage and construction loans. Consumer loans increased $1.1 billion, driven by solid growth from Laurel Road, residential mortgage loans, and indirect auto lending. For 2020, we expect average loans to be up 4% to 6% compared to 2019.

Average deposits totaled $110.0 billion for 2019, an increase of $5.0 billion compared to 2018, reflecting growth from consumer and commercial relationships. For 2020, we expect average deposits to be up 1% to 3% compared to 2019.

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Figure 1. Consolidated Average Balance Sheets, Net Interest Income, and Yields/Rates from Continuing Operations

Year ended December 31,	2019			2018		
dollars in millions	Average Balance	Interest [(a)]	Yield/ Rate [(a)]	Average Balance	Interest [(a)]	Yield/ Rate [(a)]
ASSETS						
Loans [(b), (c)]						
Commercial and industrial [(d)]	**$ 47,482**	**$ 2,144**	**4.51%**	$ 44,418	$ 1,926	4.34%
Real estate — commercial mortgage	**13,641**	**676**	**4.95**	14,267	698	4.90
Real estate — construction	**1,485**	**78**	**5.24**	1,816	90	4.97
Commercial lease financing	**4,488**	**163**	**3.63**	4,534	168	3.70
Total commercial loans	**67,096**	**3,061**	**4.56**	65,035	2,882	4.43
Real estate — residential mortgage	**6,095**	**241**	**3.95**	5,473	217	3.97
Home equity loans	**10,634**	**526**	**4.95**	11,530	547	4.74
Consumer direct loans	**2,475**	**176**	**7.11**	1,782	137	7.66
Credit cards	**1,100**	**127**	**11.51**	1,092	125	11.40
Consumer indirect loans	**4,111**	**168**	**4.09**	3,426	146	4.27
Total consumer loans	**24,415**	**1,238**	**5.07**	23,303	1,172	5.03
Total loans	**91,511**	**4,299**	**4.70**	88,338	4,054	4.59
Loans held for sale	**1,411**	**63**	**4.48**	1,501	66	4.43
Securities available for sale [(b), (e)]	**21,362**	**537**	**2.51**	17,898	409	2.20
Held-to-maturity securities [(b)]	**10,841**	**262**	**2.41**	12,003	284	2.37
Trading account assets	**1,017**	**32**	**3.18**	893	29	3.25
Short-term investments	**2,876**	**61**	**2.11**	2,450	46	1.86
Other investments [(e)]	**630**	**13**	**2.09**	697	21	3.04
Total earning assets	**129,648**	**5,267**	**4.06**	123,780	4,909	3.94
Allowance for loan and lease losses	**(880)**			(878)		
Accrued income and other assets	**14,411**			13,910		
Discontinued assets	**984**			1,212		
Total assets	**$ 144,163**			$ 138,024		
LIABILITIES						
NOW and money market deposit accounts	**$ 63,731**	**566**	**.89**	$ 56,001	297	.53
Savings deposits	**4,740**	**4**	**.09**	5,704	14	.24
Certificates of deposit ($100,000 or more)[(f)]	**7,757**	**180**	**2.32**	7,728	139	1.80
Other time deposits	**5,426**	**103**	**1.90**	5,025	67	1.34
Deposits in foreign office	**—**	**—**	**—**	—	—	—
Total interest-bearing deposits	**81,654**	**853**	**1.04**	74,458	517	.69
Federal funds purchased and securities sold under repurchase agreements	**264**	**2**	**.66**	928	11	1.14
Bank notes and other short-term borrowings	**730**	**17**	**2.31**	915	21	2.34
Long-term debt [(f), (g)]	**13,062**	**454**	**3.52**	12,715	420	3.27
Total interest-bearing liabilities	**95,710**	**1,326**	**1.39**	89,016	969	1.09
Noninterest-bearing deposits	**28,376**			30,593		
Accrued expense and other liabilities	**2,456**			2,071		
Discontinued liabilities [(g)]	**984**			1,212		
Total liabilities	**127,526**			122,892		
EQUITY						
Key shareholders' equity	**16,636**			15,131		
Noncontrolling interests	**1**			1		
Total equity	**16,637**			15,132		
Total liabilities and equity	**$ 144,163**			$ 138,024		
Interest rate spread (TE)			**2.67%**			2.85%
Net interest income (TE) and net interest margin (TE)		**3,941**	**3.04%**		3,940	3.17%
Less: TE adjustment [(b)]		**32**			31	

Net interest income, GAAP basis	**$ 3,909**	$ 3,909

(a) Results are from continuing operations. Interest excludes the interest associated with the liabilities referred to in (g) below, calculated using a matched funds transfer pricing methodology.
(b) Interest income on tax-exempt securities and loans has been adjusted to a TE basis using the statutory federal income tax rate in effect that calendar year.
(c) For purposes of these computations, nonaccrual loans are included in average loan balances.
(d) Commercial and industrial average balances include $141 million, $126 million, $117 million, $99 million, and $88 million of assets from commercial credit cards for the years ended December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016, and December 31, 2015, respectively.

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Figure 1. Consolidated Average Balance Sheets, Net Interest Income, and Yields/Rates from Continuing Operations (Continued)

2017			2016			2015			Compound Annual Rate of Change (2015-2019)	
Average Balance	Interest [a]	Yield/ Rate [a]	Average Balance	Interest [a]	Yield/ Rate [a]	Average Balance	Interest [a]	Yield/ Rate [a]	Average Balance	Interest
$ 40,848	$ 1,613	3.95%	$ 35,276	$ 1,215	3.45%	$ 29,658	$ 953	3.21%	9.9 %	17.6 %
14,878	687	4.62	11,063	451	4.07	8,020	295	3.68	11.2	18.0
2,143	103	4.78	1,460	76	5.22	1,143	43	3.73	5.4	12.6
4,677	185	3.96	4,261	161	3.78	3,976	143	3.60	2.5	2.7
62,546	2,588	4.14	52,060	1,903	3.66	42,797	1,434	3.35	9.4	16.4
5,499	214	3.89	3,632	148	4.09	2,244	95	4.21	22.1	20.5
12,380	536	4.33	11,286	456	4.04	10,503	418	3.98	.2	4.7
1,765	126	7.12	1,661	113	6.79	1,580	103	6.54	9.4	11.3
1,055	118	11.15	916	98	10.73	752	81	10.76	7.9	9.4
3,120	148	4.75	1,593	89	5.58	718	46	6.43	41.8	29.6
23,819	1,142	4.79	19,088	904	4.74	15,797	743	4.70	9.1	10.8
86,365	3,730	4.32	71,148	2,807	3.95	58,594	2,177	3.71	9.3	14.6
1,325	52	3.96	979	34	3.51	959	37	3.85	8.0	11.2
18,548	369	1.96	16,661	329	1.98	13,720	293	2.14	9.3	12.9
10,515	222	2.11	6,275	122	1.94	4,936	96	1.95	17.0	22.2
949	27	2.81	884	23	2.59	761	21	2.80	6.0	8.8
2,363	26	1.11	4,656	22	.47	2,843	8	.27	.2	50.1
712	17	2.35	679	16	2.37	706	18	2.63	(2.3)	(6.3)
120,777	4,443	3.67	101,282	3,353	3.31	82,519	2,650	3.21	9.5	14.7
(865)			(835)			(791)			2.2	
13,807			12,090			10,298			7.0	
1,448			1,707			2,132			(14.3)	
$ 135,167			$ 114,244			$ 94,158			8.9 %	
$ 54,032	143	.26	$ 46,079	87	.19	$ 36,258	56	.15	11.9 %	58.8
6,569	13	.20	3,957	3	.07	2,372	—	.02	14.9	—
6,233	82	1.31	3,911	48	1.22	2,041	26	1.28	30.6	47.3
4,698	40	.85	4,088	33	.81	3,115	22	.71	11.7	36.2
—	—	—	—	—	—	489	1	.23	N/M	N/M
71,532	278	.39	58,035	171	.30	44,275	105	.24	13.0	52.0
517	1	.24	487	1	.10	632	—	.04	(16.0)	—
1,140	15	1.34	852	10	1.18	572	9	1.52	5.0	13.6
11,921	319	2.69	9,802	218	2.29	7,332	160	2.24	12.2	23.2
85,110	613	.72	69,176	400	.58	52,811	274	.52	12.6	37.1
31,414			28,317			26,355			1.5	
1,970			2,393			2,222			2.0	
1,448			1,706			2,132			(14.3)	
119,942			101,592			83,520			8.8	
15,224			12,647			10,626			9.4	
1			5			12			(39.2)	
15,225			12,652			10,638			9.4	
$ 135,167			$ 114,244			$ 94,158			8.9 %	
		2.95%			2.73%			2.69%		
	3,830	3.17%		2,953	2.92%		2,376	2.88%		10.7
	53			34			28			2.7

$ 3,777	$ 2,919	$ 2,348	10.7 %

(e) Yield is calculated on the basis of amortized cost.
(f) Rate calculation excludes basis adjustments related to fair value hedges.
(g) A portion of long-term debt and the related interest expense is allocated to discontinued liabilities as a result of applying our matched funds transfer pricing methodology to discontinued operations.

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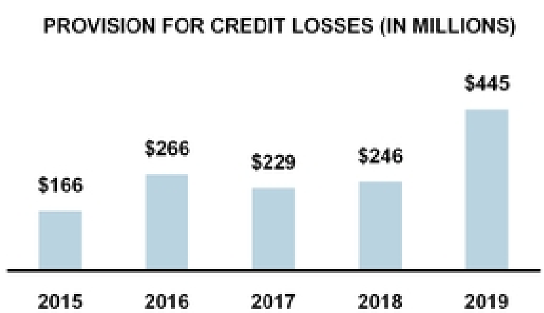
Figure 2 shows how the changes in yields or rates and average balances from the prior year affected net interest income. The section entitled "Financial Condition" contains additional discussion about changes in earning assets and funding sources.

Figure 2. Components of Net Interest Income Changes from Continuing Operations

	2019 vs. 2018		
in millions	Average Volume	Yield/ Rate	Net Change[(a)]
INTEREST INCOME			
Loans	$ 146	$ 99	$ 245
Loans held for sale	(4)	1	(3)
Securities available for sale	84	44	128
Held-to-maturity securities	(28)	6	(22)
Trading account assets	4	(1)	3
Short-term investments	9	6	15
Other investments	(2)	(6)	(8)
Total interest income (TE)	209	149	358
INTEREST EXPENSE			
NOW and money market deposit accounts	46	223	269
Savings deposits	(2)	(8)	(10)
Certificates of deposit ($100,000 or more)	1	40	41
Other time deposits	6	30	36
Total interest-bearing deposits	51	285	336
Federal funds purchased and securities sold under repurchase agreements	(6)	(3)	(9)
Bank notes and other short-term borrowings	(4)	—	(4)
Long-term debt	12	22	34
Total interest expense	53	304	357
Net interest income (TE)	$ 156	$ (155)	$ 1

(a) The change in interest not due solely to volume or rate has been allocated in proportion to the absolute dollar amounts of the change in each.

Provision for credit losses



Our provision for credit losses was $445 million for 2019, compared to $246 million for 2018. The increase of $199 million in our provision for credit losses is primarily due to the realization of $139 million from a previously disclosed fraud loss. In 2020, given a relatively stable economic outlook, we expect the provision to slightly exceed net loan charge-offs to provide for loan growth.

Noninterest income

Noninterest income for 2019 was $2.5 billion, compared to $2.5 billion during 2018. Noninterest income represented 38% of total revenue for 2019 and 39% of total revenue for 2018. In 2020, we expect noninterest income to be up 4% to 6% compared to 2019.

The following discussion explains the composition of certain elements of our noninterest income and the factors that caused those elements to change.

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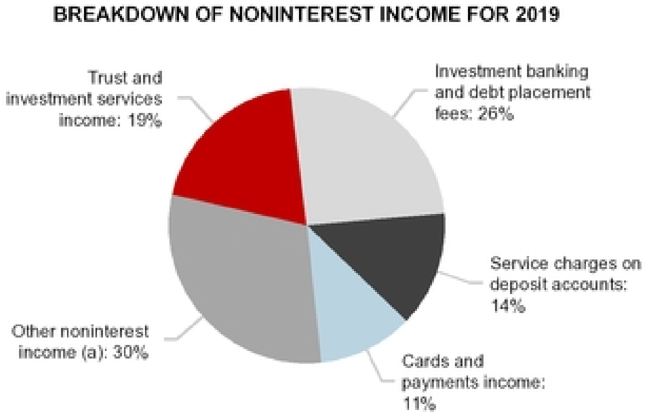
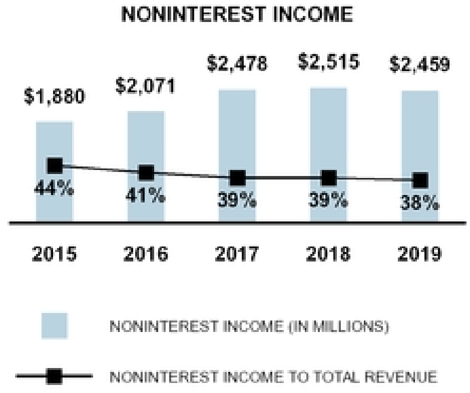
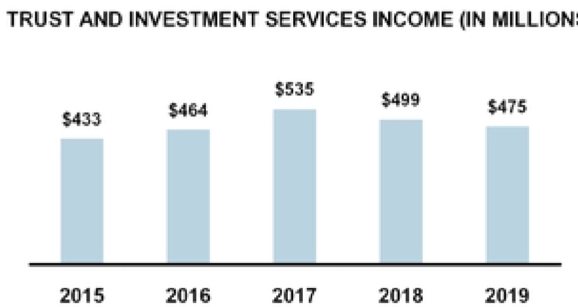
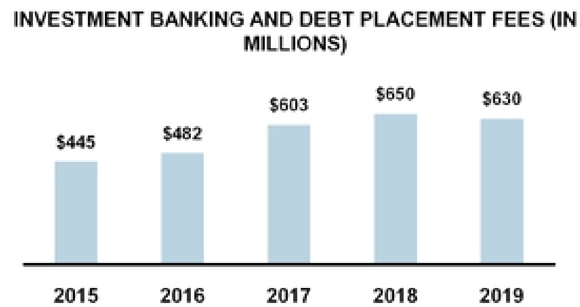
Figure 3. Noninterest Income

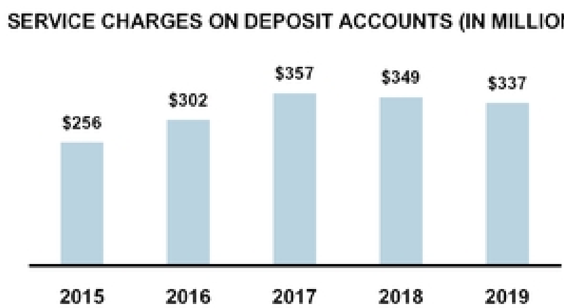


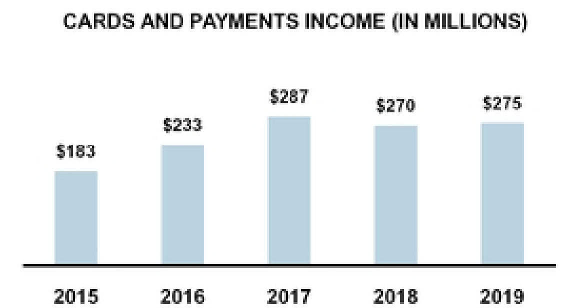


(a) Other noninterest income includes operating lease income and other leasing gains, corporate services income, corporate-owned life insurance income, consumer mortgage income, mortgage servicing fees, and other income. See the "Consolidated Statements of Income" in Part II, Item 8. Financial Statements and Supplementary Data of this report.









Trust and investment services income

Trust and investment services income consists of brokerage commissions, trust and asset management commissions, and insurance income. For 2019, trust and investment services income decreased $24 million, or 4.8%, from the prior year primarily due to a decrease in insurance commissions as a result of the sale of KIBS in the second quarter of 2018, which contributed $22 million of income for 2018 prior to the sale.

A significant portion of our trust and investment services income depends on the value and mix of assets under management. At December 31, 2019, our bank, trust, and registered investment advisory subsidiaries had assets under management of $40.8 billion, compared to $36.8 billion at December 31, 2018. The increase from 2018 to 2019 was primarily attributable to the market appreciation during the year as the market recovered from a decline that occurred during the second half of 2018.

Figure 4. Assets Under Management

Year ended December 31, *dollars in millions*	2019	2018	Change 2019 vs. 2018 Amount	Percent
Assets under management by investment type:				
Equity	**$ 25,271**	$ 21,325	$ 3,946	18.5 %
Securities lending	**309**	774	(465)	(60.1)
Fixed income	**11,000**	10,696	304	2.8
Money market	**4,253**	3,980	273	6.9
Total	**$ 40,833**	$ 36,775	$ 4,058	11.0 %

Investment banking and debt placement fees

Investment banking and debt placement fees consist of syndication fees, debt and equity financing fees, financial advisor fees, gains on sales of commercial mortgages, and agency origination fees. For 2019, investment banking and debt placement fees decreased $20 million, or 3.1%, from the prior year due to the market disruption from the government shutdown that occurred early in 2019.

Service charges on deposit accounts

Service charges on deposit accounts decreased $12 million, or 3.4%, in 2019 compared to the prior year.

Cards and payments income

Cards and payments income, which consists of debit card, consumer and commercial credit card, and merchant services income, increased $5 million, or 1.9%, in 2019 compared to 2018. This increase was primarily due to higher debit card, credit card, and merchant fees.

Other noninterest income

Other noninterest income includes operating lease income and other leasing gains, corporate services income, corporate-owned life insurance income, consumer mortgage income, mortgage servicing fees, and other income. Other noninterest income decreased $5 million, or .7%, in 2019 compared to 2018. Other income was down primarily due to a $78 million gain related to the sale of KIBS during the second quarter of 2018. Partially offsetting this was an increase in operating lease income and other leasing gains which was negatively impacted by a $42 million lease residual loss in the second quarter of 2018, as well as higher consumer mortgage income and mortgage servicing fees reflecting our ongoing investment in our residential mortgage business.

Noninterest expense

Noninterest expense for 2019 was $3.9 billion, compared to $4.0 billion for 2018. Figure 5 gives a breakdown of our major categories of noninterest expense as a percentage of total noninterest expense for the twelve months ended December 31, 2019. In 2020, we expect noninterest expense to be relatively stable compared to 2019.

The following discussion explains the composition of certain elements of our noninterest expense and the factors that caused those elements to change.

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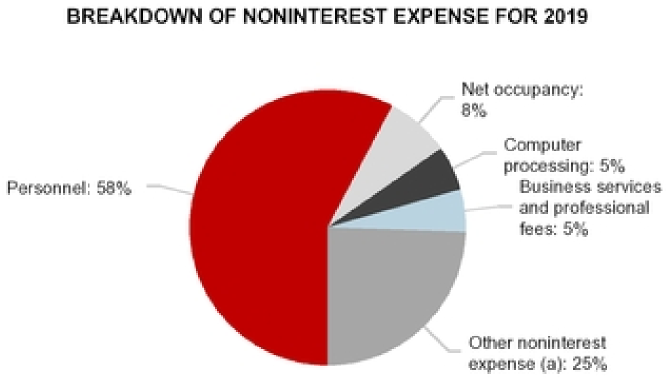
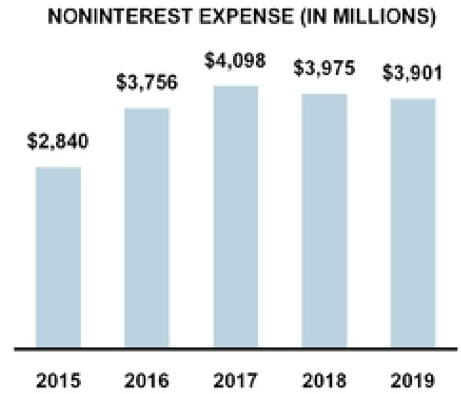
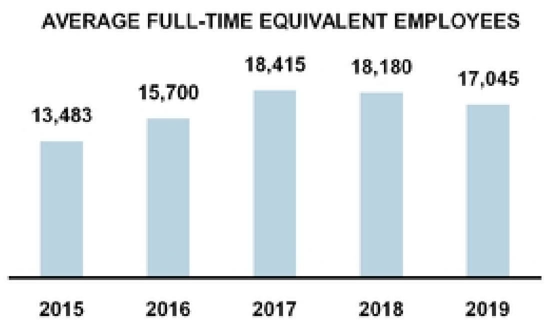
Figure 5. Noninterest Expense





(a) Other noninterest expense includes equipment, operating lease expense, marketing, FDIC assessment, intangible asset amortization, OREO expense, net, and other expense. See the "Consolidated Statements of Income" in Part II, Item 8. Financial Statements and Supplementary Data of this report.



Personnel

As shown in Figure 6, personnel expense, the largest category of our noninterest expense, decreased by $59 million, or 2.6%, in 2019 compared to 2018. The decrease reflected the successful implementation of our expense initiatives, which resulted in a $83 million decrease in salary and contract labor expense.

Figure 6. Personnel Expense

Year ended December 31, *dollars in millions*	**2019**	**2018**	**Change 2019 vs. 2018** Amount	Percent
Salaries and contract labor	**$ 1,268**	$ 1,351	$ (83)	(6.1)%
Incentive and stock-based compensation [(a)]	**584**	569	15	2.7
Employee benefits	**348**	343	5	1.6
Severance	**50**	46	4	7.9
Total personnel expense	**$ 2,250**	$ 2,309	$ (59)	(2.6)%

(a) Excludes directors' stock-based compensation of $3 million in 2019 and 2018, reported as "other noninterest expense" in Figure 5.

Net occupancy

Net occupancy expense decreased $15 million, or 4.9%, in 2019 compared to 2018, primarily due to lower depreciation and rental expenses.

Other noninterest expense

Other noninterest expense includes equipment, operating lease expense, marketing, FDIC assessment, intangible asset amortization, OREO expenses, and other miscellaneous expense categories. In total, other noninterest expense decreased $6 million, or .6%, in 2019 compared to 2018. This decline was primarily attributable to the elimination of the FDIC surcharge.

Income taxes

We recorded a tax provision from continuing operations of $314 million for 2019, compared to $344 million for 2018. The effective tax rate, which is the provision for income taxes as a percentage of income from continuing operations before income taxes, was 15.6% for 2019 and 2018. In 2020, we expect our GAAP tax rate to be in the range of 17% to 18%.

In 2019, our federal tax expense and effective tax rate differ from the amount that would be calculated using the federal statutory tax rate; primarily from investments in tax-advantaged assets, such as corporate-owned life insurance, tax credits associated with investments in low-income housing projects and energy related projects, and periodic adjustments to our tax reserves as described in Note 14 ("Income Taxes").

Business Segments Results

We previously reported our results of operations through two business segments, Key Community Bank and Key Corporate Bank, with the remaining operations recorded in Other. In the first quarter of 2019, we underwent a company-wide organizational change, resulting in the realignment of our businesses into two reportable business segments, Consumer Bank and Commercial Bank, with the remaining operations that do not meet the criteria for disclosure as a separate reportable business recorded in Other. The new business segment structure aligns with how management reviews performance and makes decisions by client, segment, and business unit. Prior period information was restated to conform to the new business segment structure.

This section summarizes the highlights and segment imperatives, market and business overview, and financial performance of our two major business segments (operating segments): Consumer Bank and Commercial Bank. Note 25 ("Business Segment Reporting") describes the products and services offered by each of these business segments and provides more detailed financial information pertaining to the segments. Dollars in the charts are presented in millions.

Consumer Bank

Segment imperatives

- Simplification and digitalization to drive growth and operating leverage
- Relationship-based strategy with a focus on financial wellness as a differentiator
- Deliver ease, value, and expertise to help guide our clients to the right approach to meet their goals

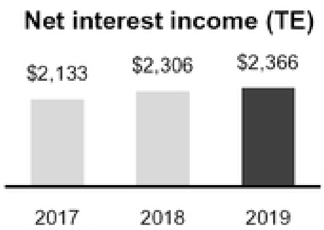
Market and business overview

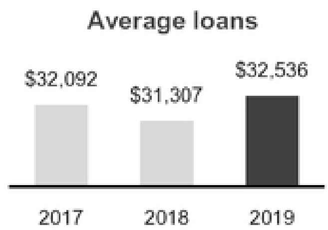
As the banking industry moves forward, so do our clients. Anticipating our clients' needs not only today, but for tomorrow and into the future, has become one of the biggest challenges for the banking industry. We view these challenges as an opportunity to help our current client base meet their own goals, as well as attract new and diverse clients. In an increasingly digital world focused on specialized convenience, we have made meaningful steps to meet those demands through new digital portals and the acquisitions of HelloWallet in 2017 and Laurel Road in 2019. These platforms place us in a strong position to develop long lasting and meaningful relationships with our current and prospective clients. Financial wellness is a core tenet of our customer relationships and we see it in three different ways: diagnose, enhance, and sustain. Our goal is to get our clients to a place where they can comfortably sustain their current financial position so we can be there for them when they are ready to grow. Clients no longer go to a branch to conduct transactions only, they go to seek advice and gain new perspectives on issues they may be facing. Overall, we have a passion to help our clients through:

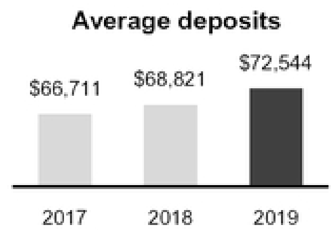
- Ease - enabling simple and clear banking with no surprises
- Value - knowing our clients and valuing each relationship
- Expertise - provide our clients with industry-leading expertise and personalized service

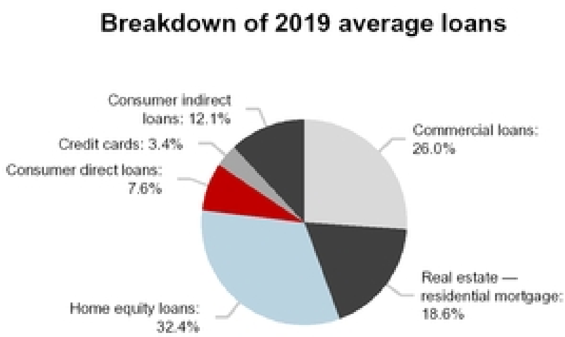
Summary of operations

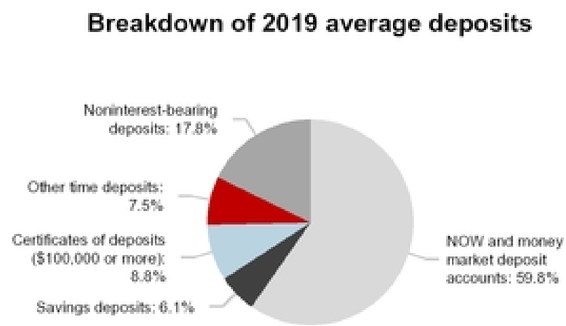
- Net income attributable to Key of $706 million in 2019, compared to $632 million in 2018, an increase of 11.7%.
- Taxable equivalent net interest income increased in 2019 by $60 million, or 2.6%, from the prior year. The increase in net interest income was primarily driven by strong balance sheet growth.
- Average loans and leases increased in 2019 by $1.2 billion, or 3.9%, from the prior year. This was driven by the addition of Laurel Road along with strength in residential mortgage and indirect auto lending.
- Average deposits increased in 2019 by $3.7 billion, or 5.4%, from the prior year. This was driven by growth in money market and certificates of deposit, reflecting Key's relationship strategy.



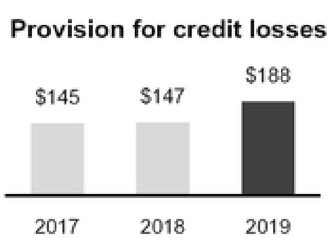


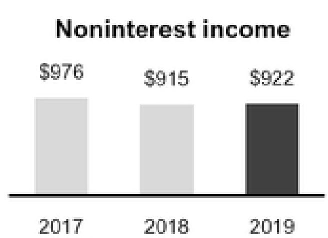






- Provision for credit losses increased $41 million in 2019 compared to the prior year, driven by higher net loan charge-offs and balance sheet growth. Credit quality in 2019 remained stable to 2018.
- Noninterest income increased in 2019 by $7 million, or .8%, from the prior year, primarily driven by growth in consumer mortgage income.
- Noninterest expense decreased in 2019 by $71 million, or 3.2%, from the prior year. The decline reflects the benefit of efficiency initiatives, strong expense discipline, and the elimination of the FDIC quarterly surcharge. The decline in expense was partially offset by expenses related to the acquisition of Laurel Road.





Commercial Bank

Segment imperatives

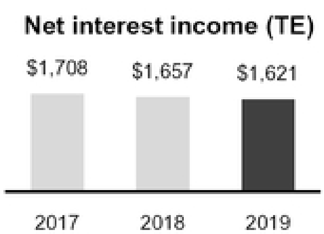
- Solve complex client needs through a differentiated product set of banking and capital markets capabilities
- Drive targeted scale through distinct product capabilities delivered to a broad set of clients
- Utilize industry expertise and broad capabilities to build relationships with narrowly targeted client sets

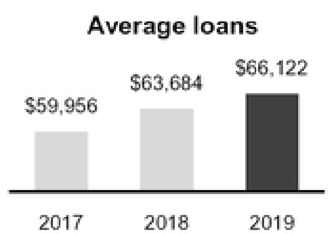
Market and business overview

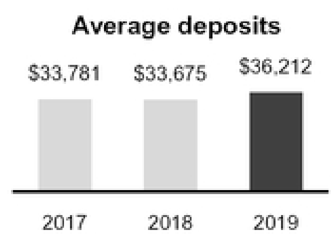
Building relationships and delivering complex solutions for middle market clients requires a distinctive operating model that understands their business and can provide a broad set of product capabilities. As competition for these clients intensifies, we have positioned the business to maintain and grow our competitive advantage by building targeted scale in businesses and client segments. Strong market share in businesses such as real estate loan servicing and equipment finance highlights our ability to successfully meet customer needs through targeted scale in distinct product capabilities. Clients expect us to understand every aspect of their business. Our seven industry verticals are aligned to drive targeted scale in segments where we have a deep breadth of industry expertise. Healthcare is the largest sector of the economy and one of our targeted verticals. Our acquisition of Cain Brothers in 2017 is one example of how we have expanded our business capabilities to further enhance our reputation as a trusted advisor to current and prospective clients. Our business model is positioned to meet our client needs because our focus is not on being a universal bank, but rather being the right bank for our clients.

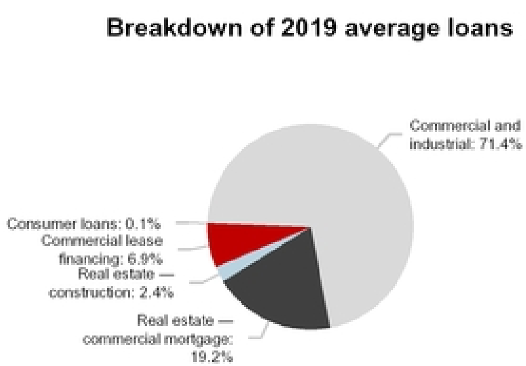
Summary of operations

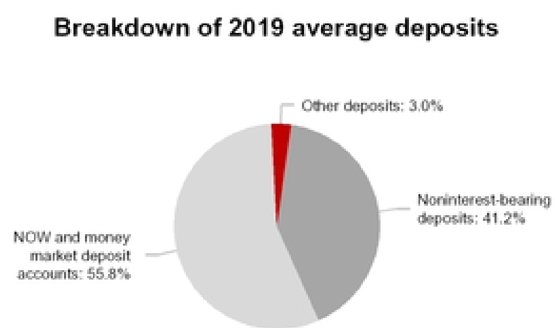
- Net income attributable to Key of $1.1 billion in 2019, compared to $1.1 billion in 2018, an increase of 3.6%.
- Taxable equivalent net interest income decreased in 2019 by $36 million, or 2.2%, from the prior year. The decrease in net interest income was primarily driven by loan spread compression due to a lower rate environment, lower purchase accounting accretion, and lower loan fees.
- Average loan and lease balances increased $2.2 billion in 2019, or 3.9%, compared to the prior year driven by broad-based growth in commercial and industrial loans.
- Average deposit balances increased $2.5 billion in 2019, or 7.5%, compared to the prior year, driven by growth in core deposits.



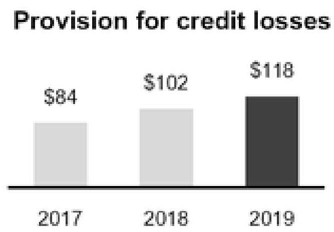


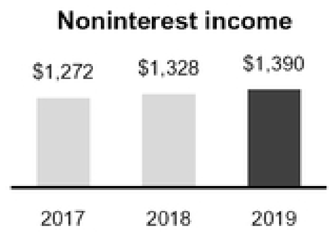


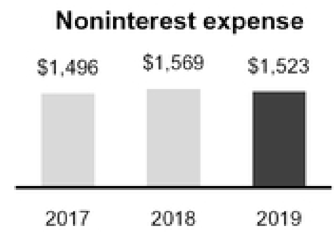




- Provision for credit losses increased $16 million in 2019 compared to the prior year, driven by balance sheet growth, lower recoveries, and higher charge-offs. Net charge-offs to average loans remained well below Key’s long term targeted range.
- Noninterest income increased $62 million in 2019, or 4.7%, from the prior year. Operating lease income and other leasing gains increased $75 million from the prior year driven by favorable client activity and a $42 million lease residual loss in 2018.
- Noninterest expense decreased by $46 million in 2019, or 2.9%, from the prior year. The decline reflects the benefit of efficiency initiatives, strong expense discipline, and the elimination of the FDIC quarterly surcharge.







Financial Condition

Loans and loans held for sale

Figure 10 shows the composition of our loan portfolio at December 31 for each of the past five years.

Figure 10. Composition of Loans

December 31, *dollars in millions*	2019 Amount	2019 Percent of Total	2018 Amount	2018 Percent of Total	2017 Amount	2017 Percent of Total
COMMERCIAL						
Commercial and industrial [(a)]	**$ 48,295**	**51.0%**	$ 45,753	51.1%	$ 41,859	48.4%
Commercial real estate:						
Commercial mortgage	**13,491**	**14.3**	14,285	15.9	14,088	16.3
Construction	**1,558**	**1.6**	1,666	1.9	1,960	2.3
Total commercial real estate loans	**15,049**	**15.9**	15,951	17.8	16,048	18.6
Commercial lease financing [(b)]	**4,688**	**5.0**	4,606	5.1	4,826	5.6
Total commercial loans	**68,032**	**71.9**	66,310	74.0	62,733	72.6
CONSUMER						
Real estate — residential mortgage	**7,023**	**7.4**	5,513	6.2	5,483	6.3
Home equity loans	**10,274**	**10.9**	11,142	12.4	12,028	13.9
Consumer direct loans	**3,513**	**3.7**	1,809	2.0	1,794	2.1
Credit cards	**1,130**	**1.2**	1,144	1.3	1,106	1.3
Consumer indirect loans	**4,674**	**4.9**	3,634	4.1	3,261	3.8
Total consumer loans	**26,614**	**28.1**	23,242	26.0	23,672	27.4
Total loans [(c)]	**$ 94,646**	**100.0%**	$ 89,552	100.0%	$ 86,405	100.0%

	2016 Amount	2016 Percent of Total	2015 Amount	2015 Percent of Total
COMMERCIAL				
Commercial and industrial [(a)]	$ 39,768	46.2%	$ 31,240	52.2%
Commercial real estate:				
Commercial mortgage	15,111	17.6	7,959	13.3
Construction	2,345	2.7	1,053	1.7
Total commercial real estate loans	17,456	20.3	9,012	15.0
Commercial lease financing [(b)]	4,685	5.5	4,020	6.7
Total commercial loans	61,909	72.0	44,272	73.9
CONSUMER				
Real estate — residential mortgage	5,547	6.4	2,242	3.7
Home equity loans	12,674	14.7	10,335	17.3
Consumer direct loans	1,788	2.1	1,600	2.7
Credit cards	1,111	1.3	806	1.3
Consumer indirect loans	3,009	3.5	621	1.1
Total consumer loans	24,129	28.0	15,604	26.1
Total loans [(c)]	$ 86,038	100.0%	$ 59,876	100.0%

(a) Loan balances include $144 million, $132 million, $119 million, $116 million, and $85 million of commercial credit card balances at December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016, and December 31, 2015, respectively.

(b) Commercial lease financing includes receivables held as collateral for a secured borrowing of $15 million, $10 million, $24 million, $68 million, and $134 million at December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016, and December 31, 2015, respectively. Principal reductions are based on the cash payments received from these related receivables. Additional information pertaining to this secured borrowing is included in Note 20 ("Long-Term Debt").

(c) Total loans exclude loans of $865 million at December 31, 2019, $1.1 billion at December 31, 2018, $1.3 billion at December 31, 2017, $1.6 billion at December 31, 2016, and $1.8 billion at December 31, 2015, related to the discontinued operations of the education lending business.

At December 31, 2019, total loans outstanding from continuing operations were $94.6 billion, compared to $89.6 billion at the end of 2018. For more information on balance sheet carrying value, see Note 1 ("Summary of Significant Accounting Policies") under the headings "Loans" and "Loans Held for Sale."

Commercial loan portfolio

Commercial loans outstanding were $68.0 billion at December 31, 2019, an increase of $1.7 billion, or 2.6%, compared to December 31, 2018, primarily driven by an increase in commercial and industrial loans.

Figure 11 provides our commercial loan portfolio by industry classification as of December 31, 2019, and December 31, 2018.

Figure 11. Commercial Loans by Industry

December 31, 2019 *dollars in millions*	Commercial and industrial	Commercial real estate	Commercial lease financing	Total commercial loans	Percent of total
Industry classification:					
Agriculture	$ 1,036	$ 178	$ 112	$ 1,326	1.9%
Automotive	2,048	467	18	2,533	3.7
Business products	1,513	111	57	1,681	2.5
Business services	3,083	203	210	3,496	5.2
Chemicals	776	40	46	862	1.3
Construction materials and contractors	1,876	238	244	2,358	3.5
Consumer discretionary	3,646	400	467	4,513	6.6
Consumer services	4,567	863	535	5,965	8.8
Equipment	1,428	76	98	1,602	2.4
Finance	6,186	64	386	6,636	9.7
Healthcare	3,000	1,564	331	4,895	7.2
Materials manufacturing and mining	1,117	44	41	1,202	1.8
Oil and gas	2,219	54	90	2,363	3.5
Public exposure	2,422	24	706	3,152	4.6
Commercial real estate	5,126	10,469	12	15,607	22.9
Technology	916	27	182	1,125	1.6
Transportation	1,298	218	737	2,253	3.3
Utilities	5,560	2	397	5,959	8.8
Other	478	7	19	504	.7
Total	$ 48,295	$ 15,049	$ 4,688	$ 68,032	100.0%

December 31, 2018 *dollars in millions*	Commercial and industrial	Commercial real estate	Commercial lease financing	Total commercial loans	Percent of total
Industry classification:					
Agriculture	$ 1,045	$ 176	$ 120	$ 1,341	2.0%
Automotive	2,140	448	46	2,634	4.0
Business products	1,596	127	50	1,773	2.7
Business services	2,779	136	228	3,143	4.7
Chemicals	933	43	56	1,032	1.6
Construction materials and contractors	1,756	207	221	2,184	3.3
Consumer discretionary	3,675	516	489	4,680	7.1
Consumer services	3,354	746	195	4,295	6.5
Equipment	1,586	89	81	1,756	2.6
Finance	5,178	459	357	5,994	9.0
Healthcare	2,999	1,743	369	5,111	7.7
Materials manufacturing and mining	1,093	46	41	1,180	1.8
Oil and gas	1,739	51	57	1,847	2.8
Public exposure	2,656	73	1,054	3,783	5.7
Commercial real estate	5,808	10,830	28	16,666	25.1
Technology	996	28	64	1,088	1.6
Transportation	1,377	229	829	2,435	3.7
Utilities	4,357	4	321	4,682	7.1
Other	686	—	—	686	1.0
Total	$ 45,753	$ 15,951	$ 4,606	$ 66,310	100.0%

Commercial and industrial. Commercial and industrial loans are the largest component of our loan portfolio, representing 51% of our total loan portfolio at December 31, 2019, and 51% at December 31, 2018. This portfolio is approximately 89% variable rate and consists of loans primarily to large corporate, middle market, and small business clients.

Commercial and industrial loans totaled $48.3 billion at December 31, 2019, an increase of $2.5 billion compared to December 31, 2018, driven by increases in the finance, utilities, oil and gas, and consumer services industries, which combined accounted for approximately 38% of the total portfolio mix at December 31, 2019.

Commercial real estate loans. Our commercial real estate lending business includes both mortgage and construction loans, and is conducted through two primary sources: our 15-state banking franchise, and KeyBank Real Estate Capital, a national line of business that cultivates relationships with owners of commercial real estate located both within and beyond the branch system. Nonowner-occupied properties, generally properties for which at least 50% of the debt service is provided by rental income from nonaffiliated third parties, represented 80% of total commercial real estate loans outstanding at December 31, 2019. Construction loans, which provide a stream of funding for properties not fully leased at origination to support debt service payments over the term of the contract or project, represented 10% of commercial real estate loans at year end.

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At December 31, 2019, commercial real estate loans totaled $15.0 billion, comprised of $13.5 billion of mortgage loans and $1.6 billion of construction loans. Compared to December 31, 2018, this portfolio decreased $902 million, driven by elevated paydowns as a result of competitive headwinds and strategic exits.

As shown in Figure 12, our commercial real estate loan portfolio includes various property types and geographic locations of the underlying collateral. These loans include commercial mortgage and construction loans in both Consumer Bank and Commercial Bank.

Figure 12. Commercial Real Estate Loans

	Geographic Region										
dollars in millions	West	Southwest	Central	Midwest	Southeast	Northeast	National	Total	Percent of Total	Construction	Commercial Mortgage
December 31, 2019											
Nonowner-occupied:											
Retail properties	$ 133	$ 41	$ 143	$ 155	$ 161	$ 580	$ 124	$ 1,337	8.9%	$ 85	$ 1,252
Multifamily properties	698	354	767	795	1,205	1,350	225	5,394	35.8	1,189	4,205
Health facilities	76	44	104	93	163	497	405	1,382	9.2	40	1,342
Office buildings	214	7	293	132	244	725	134	1,749	11.6	69	1,680
Warehouses	51	34	51	51	46	238	134	605	4.0	7	598
Manufacturing facilities	36	—	38	4	40	43	54	215	1.4	5	210
Hotels/Motels	76	—	19	—	12	129	57	293	1.9	6	287
Residential properties	—	—	—	2	—	98	—	100	.7	5	95
Land and development	20	5	—	3	2	9	—	39	.3	34	5
Other	80	9	71	86	22	259	358	885	5.9	23	862
Total nonowner-occupied	1,384	494	1,486	1,321	1,895	3,928	1,491	11,999	79.7	1,463	10,536
Owner-occupied	833	4	285	536	71	1,321	—	3,050	20.3	95	2,955
Total	$ 2,217	$ 498	$ 1,771	$ 1,857	$ 1,966	$ 5,249	$ 1,491	$ 15,049	100.0%	$ 1,558	$ 13,491
Nonowner-occupied:											
Nonperforming loans	$ 1	—	—	$ 7	$ 7	$ 20	$ 52	$ 87	N/M	$ 2	$ 85
Accruing loans past due 90 days or more	—	—	—	2	—	11	—	13	N/M	1	12
Accruing loans past due 30 through 89 days	1	—	—	7	—	8	—	16	N/M	2	14
December 31, 2018											
Nonowner-occupied:											
Retail properties	$ 126	$ 45	$ 142	$ 174	$ 184	$ 674	$ 302	$ 1,647	10.3%	$ 82	$ 1,565
Multifamily properties	452	210	914	608	1,153	1,708	693	5,738	36.0	1,163	4,575
Health facilities	98	—	49	59	153	724	385	1,468	9.2	20	1,449
Office buildings	270	7	224	90	165	851	119	1,726	10.8	120	1,605
Warehouses	66	34	20	47	71	290	203	731	4.6	48	684
Manufacturing facilities	42	—	36	3	25	38	91	235	1.5	20	215
Hotels/Motels	95	—	19	—	6	204	62	386	2.4	—	386
Residential properties	3	—	—	3	21	135	—	162	1.0	53	109
Land and development	17	4	5	2	—	48	—	76	.5	52	23
Other	46	9	61	53	4	323	151	647	4.0	11	636
Total nonowner-occupied	1,215	309	1,470	1,039	1,782	4,995	2,006	12,816	80.3	1,569	11,247
Owner-occupied	837	25	283	493	58	1,439	—	3,135	19.7	97	3,038
Total	$ 2,052	$ 334	$ 1,753	$ 1,532	$ 1,840	$ 6,434	$ 2,006	$ 15,951	100.0%	$ 1,666	$ 14,285
Nonperforming loans	$ 1	—	—	$ 8	—	$ 7	$ 53	$ 69	N/M	—	$ 69
Accruing loans past due 90 days or more	—	—	—	2	$ 11	11	—	24	N/M	$ 12	12
Accruing loans past due 30 through 89 days	—	—	$ 11	1	1	23	13	49	N/M	13	36

West –	Alaska, California, Hawaii, Idaho, Montana, Oregon, Washington, and Wyoming
Southwest –	Arizona, Nevada, and New Mexico
Central –	Arkansas, Colorado, Oklahoma, Texas, and Utah
Midwest –	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin
Southeast –	Alabama, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, Washington, D.C., and West Virginia
Northeast –	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
National –	Accounts in three or more regions

Consumer loan portfolio

Consumer loans outstanding at December 31, 2019, totaled $26.6 billion, an increase of $3.4 billion, or 14.5%, from one year ago, driven by growth in consumer direct lending as a result of the Laurel Road acquisition, residential mortgage loans, and indirect auto lending.

The home equity portfolio is comprised of loans originated by our Consumer Bank within our 15-state footprint and is the largest segment of our consumer loan portfolio, representing approximately 39% of consumer loans outstanding at year end.

As shown in Figure 8, we held the first lien position for approximately 61% of the Consumer Bank home equity portfolio at December 31, 2019, and 60% at December 31, 2018. For loans with real estate collateral, we track borrower performance monthly. Regardless of the lien position, credit metrics are refreshed quarterly, including recent FICO scores as well as original and updated loan-to-value ratios. This information is used in establishing the ALLL. Our methodology is described in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Allowance for Loan and Lease Losses.”

Figure 13. Consumer Loans by State

December 31, 2019	Real estate — residential mortgage	Home equity loans	Consumer direct loans	Credit cards	Consumer indirect loans	Total
State						
New York	$ 1,146	$ 2,655	$ 548	$ 404	$ 797	$ 5,550
Ohio	601	1,458	461	247	827	3,594
Washington	1,126	1,546	252	102	8	3,034
Pennsylvania	282	677	189	55	477	1,680
Connecticut	1,029	375	68	26	154	1,652
Oregon	517	852	94	48	2	1,513
Colorado	544	428	109	34	2	1,117
Maine	123	434	71	38	359	1,025
Indiana	117	412	131	47	118	825
Massachusetts	257	48	62	6	437	810
Other	1,281	1,389	1,528	123	1,493	5,814
Total	$ 7,023	$ 10,274	$ 3,513	$ 1,130	$ 4,674	$ 26,614
December 31, 2018						
New York	$ 1,117	$ 2,881	$ 402	$ 415	$ 730	$ 5,545
Ohio	479	1,538	383	252	506	3,158
Washington	714	1,714	234	104	11	2,777
Connecticut	1,090	413	30	23	143	1,699
Pennsylvania	275	726	83	52	276	1,412
Oregon	366	905	80	47	3	1,401
Colorado	256	509	76	35	2	878
Massachusetts	255	50	27	5	341	678
California	49	27	13	4	38	131
Texas	1	15	8	4	18	46
Other	911	2,364	473	203	1,566	5,517
Total	$ 5,513	$ 11,142	$ 1,809	$ 1,144	$ 3,634	$ 23,242

Loan sales

As shown in Figure 14, during 2019, we sold $12.2 billion of our loans. Sales of loans classified as held for sale generated net gains of $188 million during 2019.

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Figure 14 summarizes our loan sales during 2019 and 2018.

Figure 14. Loans Sold (Including Loans Held for Sale)

in millions	Commercial	Commercial Real Estate	Commercial Lease Financing	Residential Real Estate	Consumer Direct	Total
2019						
Fourth quarter	**$ 50**	**$ 3,138**	**$ 222**	**$ 559**	**—**	**$ 3,969**
Third quarter	**220**	**2,600**	**68**	**569**	**$ 247**	**3,704**
Second quarter	**154**	**1,864**	**96**	**329**	**—**	**2,443**
First quarter	**301**	**1,536**	**34**	**225**	**—**	**2,096**
Total	**$ 725**	**$ 9,138**	**$ 420**	**$ 1,682**	**$ 247**	**$ 12,212**
2018						
Fourth quarter	$ 157	$ 4,918	$ 104	$ 331	—	$ 5,510
Third quarter	247	2,242	52	302	—	2,843
Second quarter	253	2,266	144	308	—	2,971
First quarter	141	2,251	66	284	—	2,742
Total	$ 798	$ 11,677	$ 366	$ 1,225	—	$ 14,066

Figure 15 shows loans that are either administered or serviced by us but not recorded on the balance sheet; this includes loans that were sold.

Figure 15. Loans Administered or Serviced

December 31, *in millions*	2019	2018	2017	2016	2015
Commercial real estate loans	**$ 347,186**	$ 291,158	$ 238,718	$ 218,135	$ 211,274
Residential mortgage	**6,146**	5,209	4,582	4,198	—
Education loans	**625**	766	932	1,122	1,339
Commercial lease financing	**1,047**	916	862	899	932
Commercial loans	**591**	549	488	418	335
Consumer direct	**2,243**	—	—	—	—
Total	**$ 357,838**	$ 298,598	$ 245,582	$ 224,772	$ 213,880

In the event of default by a borrower, we are subject to recourse with respect to approximately $4.9 billion of the $358 billion of loans administered or serviced at December 31, 2019. Additional information about this recourse arrangement is included in Note 22 (“Commitments, Contingent Liabilities, and Guarantees”) under the heading “Recourse agreement with FNMA.”

We derive income from several sources when retaining the right to administer or service loans that are sold. We earn noninterest income (recorded as “mortgage servicing fees”) from fees for servicing or administering loans. This fee income is reduced by the amortization of related servicing assets. In addition, we earn interest income from investing funds generated by escrow deposits collected in connection with the servicing loans. Additional information about our mortgage servicing assets is included in Note 9 (“Mortgage Servicing Assets”).

Maturities and sensitivity of certain loans to changes in interest rates

Figure 16 shows the remaining maturities of certain commercial and real estate loans, and the sensitivity of those loans to changes in interest rates. At December 31, 2019, approximately 27% of these outstanding loans were scheduled to mature within one year.

Figure 16. Remaining Maturities and Sensitivity of Certain Loans to Changes in Interest Rates

December 31, 2019 *in millions*	Within One Year	One - Five Years	Over Five Years	Total
Commercial and industrial	$ 12,529	$ 28,246	$ 7,520	$ 48,295
Real estate — construction	896	532	130	1,558
Total	$ 13,425	$ 28,778	$ 7,650	$ 49,853
Loans with floating or adjustable interest rates (a)		$ 25,631	$ 4,602	$ 30,233
Loans with predetermined interest rates (b)		3,147	3,048	6,195
Total		$ 28,778	$ 7,650	$ 36,428

(a) Floating and adjustable rates vary in relation to other interest rates (such as the base lending rate) or a variable index that may change during the term of the loan.
(b) Predetermined interest rates either are fixed or may change during the term of the loan according to a specific formula or schedule.

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Securities

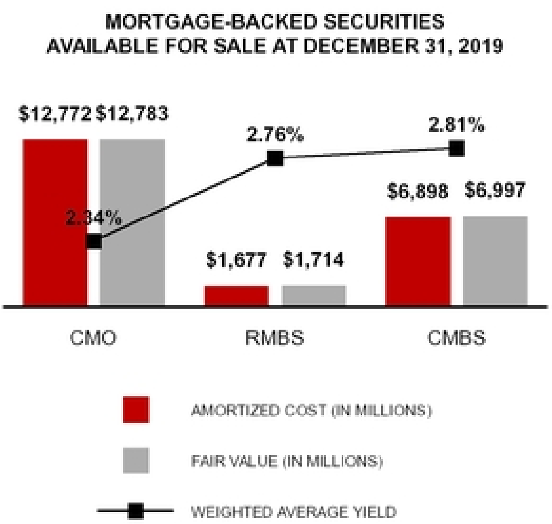
Our securities portfolio totaled $31.9 billion at December 31, 2019, compared to $30.9 billion at December 31, 2018. Available-for-sale securities were $21.8 billion at December 31, 2019, compared to $19.4 billion at December 31, 2018. Held-to-maturity securities were $10.1 billion at December 31, 2019, compared to $11.5 billion at December 31, 2018.

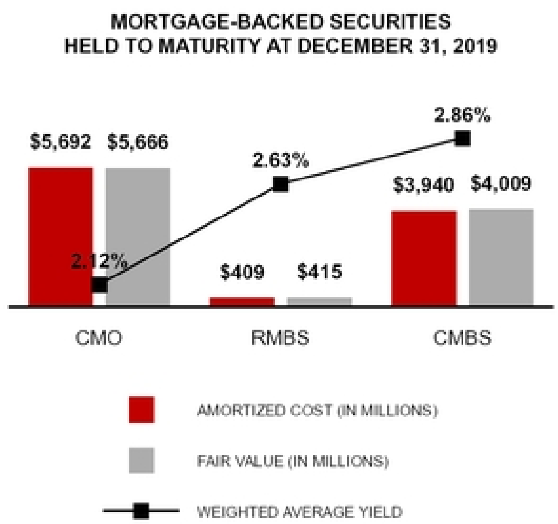
As shown in Figure 17, all of our mortgage-backed securities, which include both securities available-for-sale and held-to-maturity securities, are issued by government-sponsored enterprises or GNMA, and are traded in liquid secondary markets. These securities are recorded on the balance sheet at fair value for the available-for-sale portfolio and at cost for the held-to-maturity portfolio. For more information about these securities, see Note 6 ("Fair Value Measurements") under the heading "Qualitative Disclosures of Valuation Techniques," and Note 7 ("Securities").

Figure 17. Mortgage-Backed Securities by Issuer

December 31, *in millions*		**2019**		**2018**
FHLMC	**$**	**5,115**	$	7,048
FNMA		**12,308**		10,076
GNMA		**14,112**		13,637
Total [(a)]	**$**	**31,535**	$	30,761

(a) Includes securities held in the available-for-sale and held-to-maturity portfolios.





<u>Securities available for sale</u>

The majority of our securities available-for-sale portfolio consists of Federal Agency CMOs and mortgage-backed securities. CMOs are debt securities secured by a pool of mortgages or mortgage-backed securities. These mortgage securities generate interest income, serve as collateral to support certain pledging agreements, and provide liquidity value under regulatory requirements.

We periodically evaluate our securities available-for-sale portfolio in light of established A/LM objectives, changing market conditions that could affect the profitability of the portfolio, the regulatory environment, and the level of interest rate risk to which we are exposed. These evaluations may cause us to take steps to adjust our overall balance sheet positioning.

In addition, the size and composition of our securities available-for-sale portfolio could vary with our needs for liquidity and the extent to which we are required (or elect) to hold these assets as collateral to secure public funds and trust deposits. Although we generally use debt securities for this purpose, other assets, such as securities purchased under resale agreements or letters of credit, are used occasionally when they provide a lower cost of collateral or more favorable risk profiles.

Our investing activities continue to complement other balance sheet developments and provide for our ongoing liquidity management needs. Our actions to not reinvest the monthly security cash flows at various times served to provide the liquidity necessary to address our funding requirements. These funding requirements included ongoing loan growth and occasional debt maturities. At other times, we may make additional investments that go beyond the replacement of maturities or mortgage security cash flows as our liquidity position and/or interest rate risk management strategies may require. Lastly, our focus on investing in high quality liquid assets, including GNMA-related securities, is related to liquidity management strategies to satisfy regulatory requirements.

Figure 18 shows the composition, TE yields, and remaining maturities of our securities available for sale. For more information about these securities, including gross unrealized gains and losses by type of security and securities pledged, see Note 7 ("Securities").

Figure 18. Securities Available for Sale

dollars in millions	U.S. Treasury, Agencies, and Corporations	States and Political Subdivisions	Agency Residential Collateralized Mortgage Obligations[a]	Agency Residential Mortgage-backed Securities[a],[b]	Agency Commercial Mortgage-backed Securities[a]	Other Securities	Total	Weighted-Average Yield[b]
December 31, 2019								
Remaining maturity:								
One year or less	**$ 294**	**$ 4**	**$ 182**	**$ 3**	**—**	**$ 11**	**$ 494**	**2.12%**
After one through five years	**40**	**—**	**11,923**	**1,339**	**$ 4,184**	**—**	**17,486**	**2.46**
After five through ten years	**—**	**—**	**678**	**365**	**2,813**	**—**	**3,856**	**2.82**
After ten years	**—**	**—**	**—**	**7**	**—**	**—**	**7**	**3.07**
Fair value	**$ 334**	**$ 4**	**$ 12,783**	**$ 1,714**	**$ 6,997**	**$ 11**	**$ 21,843**	**—**
Amortized cost	**334**	**4**	**12,772**	**1,677**	**6,898**	**7**	**21,692**	**2.52%**
Weighted-average yield [b]	**1.86%**	**5.52%**	**2.34%**	**2.76%**	**2.81%**	**—**	**2.52%**	**—**
Weighted-average maturity	**.7 years**	**.8 years**	**3.3 years**	**4.1 years**	**5.0 years**	**.5 years**	**3.9 years**	**—**
December 31, 2018								
Fair value	$ 147	$ 7	$ 13,962	$ 2,105	$ 3,187	$ 20	$ 19,428	—
Amortized cost	150	7	14,315	2,128	3,300	17	19,917	2.46%

(a) Maturity is based upon expected average lives rather than contractual terms.
(b) Weighted-average yields are calculated based on amortized cost. Such yields have been adjusted to a TE basis using the statutory federal income tax rate in effect that calendar year.

Held-to-maturity securities

Federal Agency CMOs and mortgage-backed securities constitute essentially all of our held-to-maturity securities. The remaining balance comprises asset-back securities and foreign bonds. Figure 19 shows the composition, yields, and remaining maturities of these securities.

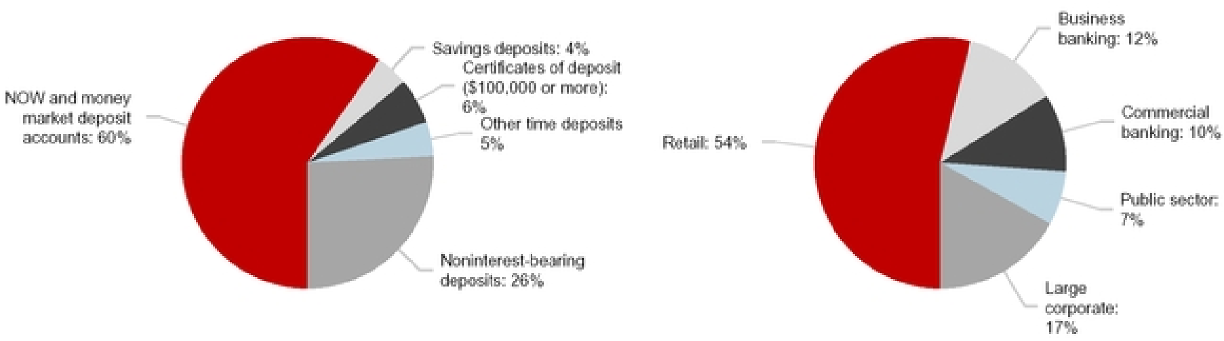
Figure 19. Held-to-Maturity Securities

dollars in millions	Agency Residential Collateralized Mortgage Obligations[a]	Agency Residential Mortgage-backed Securities[a]	Agency Commercial Mortgage-backed Securities[a]	Asset-backed securities	Other Securities	Total	Weighted-Average Yield[b]
December 31, 2019							
Remaining maturity:							
One year or less	**$ 59**	**—**	**—**	**$ 3**	**$ 4**	**$ 66**	**1.95%**
After one through five years	**4,970**	**$ 162**	**$ 2,022**	**8**	**11**	**7,173**	**2.35**
After five through ten years	**663**	**247**	**1,918**	**—**	**—**	**2,828**	**2.64**
After ten years	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Amortized cost	**$ 5,692**	**$ 409**	**$ 3,940**	**$ 11**	**$ 15**	**$ 10,067**	**2.43%**
Fair value	**5,666**	**415**	**4,009**	**11**	**15**	**10,116**	**—**
Weighted-average yield[b]	**2.12%**	**2.63%**	**2.86%**	**2.48%**	**3.29%**	**2.43%**	**—**
Weighted-average maturity	**3.5 years**	**5.5 years**	**5.5 years**	**.4 years**	**1.9 years**	**4.4 years**	**—**
December 31, 2018							
Amortized cost	$ 7,021	$ 490	$ 3,996	—	$ 12	$ 11,519	2.41%
Fair value	6,769	476	3,865	—	12	11,122	—

(a) Maturity is based upon expected average lives rather than contractual terms.
(b) Weighted-average yields are calculated based on amortized cost. Such yields have been adjusted to a TE basis using the statutory federal income tax rate in effect that calendar year.

Deposits and other sources of funds

Figure 20. Breakdown of Deposits at December 31, 2019



Deposits are our primary source of funding. At December 31, 2019, our deposits totaled $111.9 billion, an increase of $4.6 billion, compared to December 31, 2018. The increase in deposits compared to the prior year reflects our strategy to acquire and expand client relationships.

Wholesale funds, consisting of short-term borrowings and long-term debt, totaled $13.5 billion at December 31, 2019, compared to $14.6 billion at December 31, 2018. The decrease from the prior year reflects a shift in funding mix stemming from strong deposit growth.

Figure 21 shows the maturity distribution of time deposits of $100,000 or more.

Figure 21. Maturity Distribution of Time Deposits of $100,000 or More

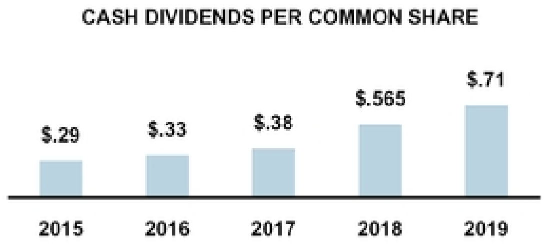
December 31, 2019 *in millions*	**Total**
Remaining maturity:	
Three months or less	$ 1,748
After three through six months	1,727
After six through twelve months	2,209
After twelve months	914
Total	$ 6,598

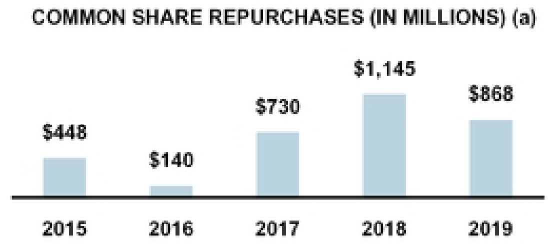
Capital

The objective of management of capital is to maintain capital levels consistent with our risk appetite and sufficient in size to operate within a wide range of operating environments. We have identified three primary uses of capital:

1. Investing in our businesses, supporting our clients, and loan growth;
2. Maintaining or increasing our Common Share dividend; and
3. Returning capital in the form of Common Share repurchases to our shareholders.

The following sections discuss certain ways we have deployed our capital. For further information, see the Consolidated Statements of Changes in Equity and Note 24 (“Shareholders' Equity”).





(a) Common Share repurchases were suspended during the third quarter of 2015 due to the then pending merger with First Niagara. We resumed our Common Share repurchase program during the third quarter of 2016 upon the completion of the First Niagara merger.

Dividends

Consistent with our 2018 capital plan, the Board declared a quarterly dividend of $.170 per Common Share for the first and second quarters of 2019. The Board declared a quarterly dividend of $.185 per Common Share for the third and fourth quarters of 2019, consistent with our 2019 capital plan. These quarterly dividend payments brought our annual dividend to $.71 per Common Share for 2019.

Common Shares outstanding

Our Common Shares are traded on the NYSE under the symbol KEY with 32,943 holders of record at February 21, 2020. Our book value per Common Share was $15.54 based on 977.2 million shares outstanding at December 31, 2019, compared to $13.90 based on 1.020 billion shares outstanding at December 31, 2018. At December 31, 2019, our tangible book value per Common Share was $12.56, compared to $11.14 at December 31, 2018.

Figure 35 in the section entitled “Fourth Quarter Results” shows per Common Share earnings and dividends paid by quarter for each of the last two years.

Figure 22 shows activities that caused the change in our outstanding Common Shares over the past two years.

Figure 22. Changes in Common Shares Outstanding

		2019 Quarters				
in thousands	2019	Fourth	Third	Second	First	2018
Shares outstanding at beginning of period	1,019,503	988,538	1,003,114	1,013,186	1,019,503	1,069,084
Common Shares repurchased	(50,247)	(12,968)	(15,076)	(10,412)	(11,791)	(56,292)
Shares reissued (returned) under employee benefit plans	7,933	1,619	500	340	5,474	6,711
Shares outstanding at end of period	977,189	977,189	988,538	1,003,114	1,013,186	1,019,503

During 2019, Common Shares outstanding decreased by 42.3 million shares due to Common Share repurchases under our 2018 and 2019 capital plans.

At December 31, 2019, we had 279.5 million treasury shares, compared to 237.2 million treasury shares at December 31, 2018. Going forward, we expect to reissue treasury shares as needed in connection with stock-based compensation awards and for other corporate purposes.

Capital adequacy

Capital adequacy is an important indicator of financial stability and performance. All of our capital ratios remained in excess of regulatory requirements at December 31, 2019. Our capital and liquidity levels are intended to position us to weather an adverse operating environment while continuing to serve our clients’ needs, as well as to meet the Regulatory Capital Rules described in the “Supervision and regulation” section of Item 1 of this report. Our shareholders’ equity to assets ratio was 11.75% at December 31, 2019, compared to 11.17% at December 31, 2018. Our tangible common equity to tangible assets ratio was 8.64% at December 31, 2019, compared to 8.30% at December 31, 2018. The new minimum capital and leverage ratios under the Regulatory Capital Rules together with the estimated ratios of KeyCorp at December 31, 2019, calculated on a fully phased-in basis, are set forth under the heading “Basel III” in the “Supervision and Regulation” section in Item 1 of this report.

Figure 23 represents the details of our regulatory capital positions at December 31, 2019, and December 31, 2018, under the Regulatory Capital Rules. Information regarding the regulatory capital ratios of KeyCorp's banking subsidiaries is presented in Note 24 ("Shareholders' Equity").

Figure 23. Capital Components and Risk-Weighted Assets

December 31, *dollars in millions*		**2019**	**2018**
COMMON EQUITY TIER 1			
Key shareholders' equity (GAAP)		**$ 17,038**	$ 15,595
Less:	Preferred Stock [a]	**1,856**	1,421
	Common Equity Tier 1 capital before adjustments and deductions	**15,182**	14,174
Less:	Goodwill, net of deferred taxes	**2,584**	2,455
	Intangible assets, net of deferred taxes	**207**	250
	Deferred tax assets	**9**	9
	Net unrealized gains (losses) on available-for-sale securities, net of deferred taxes	**115**	(372)
	Accumulated gains (losses) on cash flow hedges, net of deferred taxes	**250**	(78)
	Amounts in AOCI attributed to pension and postretirement benefit costs, net of deferred taxes	**(339)**	(381)
	Total Common Equity Tier 1 capital	**12,356**	12,291
TIER 1 CAPITAL			
Common Equity Tier 1		**12,356**	12,291
Additional Tier 1 capital instruments and related surplus		**1,856**	1,421
Less:	Deductions	**—**	—
	Total Tier 1 capital	**14,212**	13,712
TIER 2 CAPITAL			
Tier 2 capital instruments and related surplus		**1,546**	1,279
Allowance for losses on loans and liability for losses on lending-related commitments [b]		**978**	962
Less:	Deductions	**—**	—
	Total Tier 2 capital	**2,524**	2,241
	Total risk-based capital	**$ 16,736**	$ 15,953
RISK-WEIGHTED ASSETS			
Risk-weighted assets on balance sheet		**$ 102,441**	$ 98,232
Risk-weighted off-balance sheet exposure		**27,303**	24,593
Market risk-equivalent assets		**1,121**	963
	Gross risk-weighted assets	**130,865**	123,788
Less:	Excess allowance for loan and lease losses	**—**	—
	Net risk-weighted assets	**$ 130,865**	$ 123,788
AVERAGE QUARTERLY TOTAL ASSETS		**$ 143,910**	$ 138,689
CAPITAL RATIOS			
Tier 1 risk-based capital		**10.86%**	11.08%
Total risk-based capital		**12.79**	12.89
Leverage [c]		**9.88**	9.89
Common Equity Tier 1		**9.44**	9.93

(a) Net of capital surplus.
(b) The ALLL included in Tier 2 capital is limited by regulation to 1.25% of the institution's standardized total risk-weighted assets (excluding its standardized market risk-weighted assets). The ALLL includes $10 million and $14 million of allowance classified as "discontinued assets" on the balance sheet at December 31, 2019, and December 31, 2018, respectively.
(c) This ratio is Tier 1 capital divided by average quarterly total assets as defined by the Federal Reserve less: (i) goodwill, (ii) the disallowed intangible and deferred tax assets, and (iii) other deductions from assets for leverage capital purposes.

Off-Balance Sheet Arrangements and Aggregate Contractual Obligations

Off-balance sheet arrangements

We are party to various types of off-balance sheet arrangements, which could lead to contingent liabilities or risks of loss that are not reflected on the balance sheet.

Variable interest entities

In accordance with the applicable accounting guidance for consolidations, we consolidate a VIE if we have: (i) a variable interest in the entity; (ii) the power to direct activities of the VIE that most significantly impact the entity's economic performance; and (iii) the obligation to absorb losses of the entity or the right to receive benefits from the entity that could potentially be significant to the VIE (i.e., we are considered to be the primary beneficiary). Additional information regarding the nature of VIEs and our involvement with them is included in Note 1 ("Summary of Significant Accounting Policies") under the heading "Principles of Consolidation and Basis of Presentation" and in Note 13 ("Variable Interest Entities").

Commitments to extend credit or funding

Loan commitments provide for financing on predetermined terms as long as the client continues to meet specified criteria. These commitments generally carry variable rates of interest and have fixed expiration dates or other termination clauses. We typically charge a fee for our loan commitments. Since a commitment may expire without resulting in a loan or being fully utilized, the total amount of an outstanding commitment may significantly exceed any related cash outlay. Further information about our loan commitments at December 31, 2019, is presented in Note 22 ("Commitments, Contingent Liabilities, and Guarantees") under the heading "Commitments to Extend Credit or Funding." Figure 24 shows the remaining contractual amount of each class of commitment to extend credit or funding. For loan commitments and commercial letters of credit, this amount represents our maximum possible accounting loss on the unused commitment if the borrower were to draw upon the full amount of the commitment and subsequently default on payment for the total amount of the then outstanding loan.

Other off-balance sheet arrangements

Other off-balance sheet arrangements include financial instruments that do not meet the definition of a guarantee in accordance with the applicable accounting guidance, and other relationships, such as liquidity support provided to asset-backed commercial paper conduits, indemnification agreements and intercompany guarantees. Information about such arrangements is provided in Note 22 under the heading "Other Off-Balance Sheet Risk."

Contractual obligations

Figure 24 summarizes our significant contractual obligations, and lending-related and other off-balance sheet commitments at December 31, 2019, by the specific time periods in which related payments are due or commitments expire.

Figure 24. Contractual Obligations and Other Off-Balance Sheet Commitments

December 31, 2019 *in millions*	**Within 1 year**	**After 1 through 3 years**	**After 3 through 5 years**	**After 5 years**	**Total**
Contractual obligations:[(a)]					
Deposits with no stated maturity	$ 100,218	—	—	—	$ 100,218
Time deposits of $100,000 or more	5,684	$ 873	$ 31	$ 10	6,598
Other time deposits	4,078	867	93	16	5,054
Federal funds purchased and securities sold under repurchase agreements	387	—	—	—	387
Bank notes and other short-term borrowings	705	—	—	—	705
Long-term debt	1,010	5,970	525	4,943	12,448
Noncancellable operating leases	149	259	189	278	875
Liability for unrecognized tax benefits	19	—	—	—	19
Purchase obligations [(b)]	200	225	94	18	537
Total	$ 112,450	$ 8,194	$ 932	$ 5,265	$ 126,841
Lending-related and other off-balance sheet commitments:					
Commercial, including real estate	$ 15,647	$ 14,480	$ 16,922	$ 1,235	$ 48,284
Home equity	436	800	618	8,091	9,945
Credit cards	6,560	—	—	—	6,560
Purchase cards	729	—	—	—	729
Commercial letters of credit	37	47	7	—	91
Principal investing commitments	20	1	—	—	21
Tax credit investment commitments	547	—	—	—	547
Total	$ 23,976	$ 15,328	$ 17,547	$ 9,326	$ 66,177

(a) Deposits and borrowings exclude interest.
(b) Includes purchase obligations for goods and services covered by noncancellable contracts and contracts including cancellation fees.

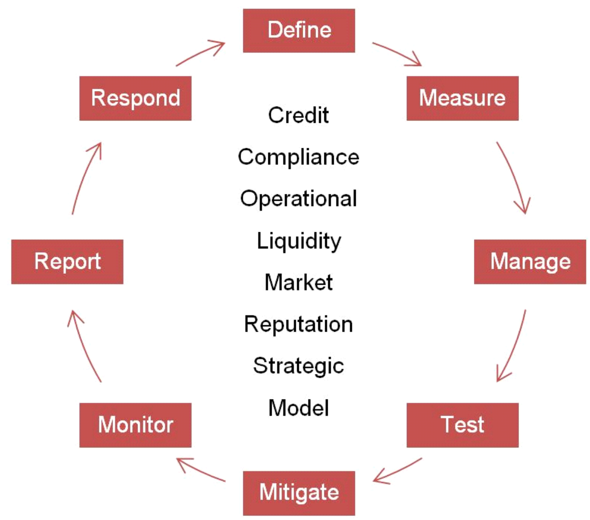
Guarantees

We are a guarantor in various agreements with third parties. As guarantor, we may be contingently liable to make payments to the guaranteed party based on changes in a specified interest rate, foreign exchange rate or other variable (including the occurrence or nonoccurrence of a specified event). These variables, known as underlyings, may be related to an asset or liability, or another entity's failure to perform under a contract. Additional information regarding these types of arrangements is presented in Note 22 ("Commitments, Contingent Liabilities, and Guarantees") under the heading "Guarantees."

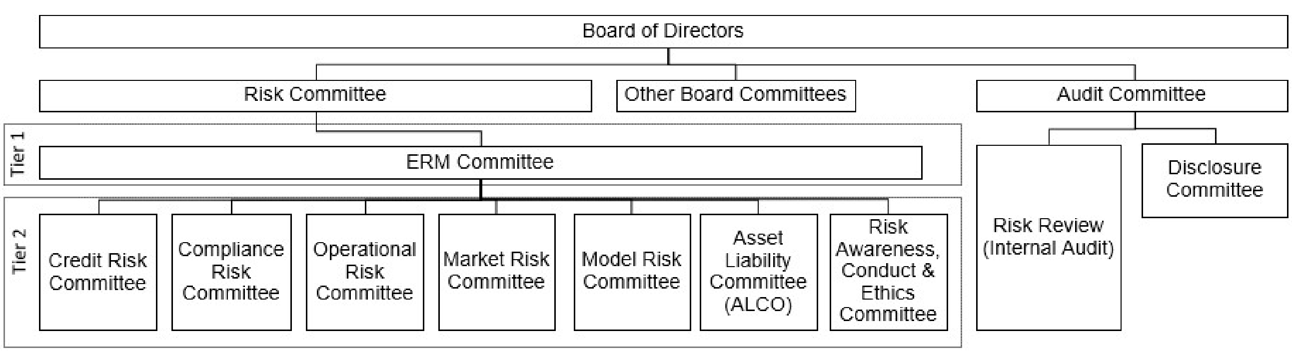
Risk Management

Overview

Like all financial services companies, we engage in business activities and assume the related risks. The most significant risks we face are credit, compliance, operational, liquidity, market, reputation, strategic, and model risks. Our risk management activities are shown in the following chart, and we manage such risks across the entire enterprise to maintain safety and soundness and maximize profitability. Certain of these risks are defined and discussed in greater detail in the remainder of this section.



Federal banking regulators continue to emphasize with financial institutions the importance of relating capital management strategy to the level of risk at each institution. We believe our internal risk management processes help us achieve and maintain capital levels that are commensurate with our business activities and risks, and conform to regulatory expectations. The table below depicts our risk management hierarchy and associated responsibilities and activities of each group.



Group	Overview and Responsibilities	Activities
Board of Directors	– Oversight capacity – Ensure Key's risks are managed in a manner that is not only effective and balanced, but also has a fiduciary duty to the shareholders	– Understands Key's risk philosophy – Approves the risk appetite – Inquires about risk practices – Reviews the portfolio of risks – Compares the actual risks to the risk appetite – Is apprised of significant risks, both actual and emerging, and determines whether management is responding appropriately – Challenges management and ensures accountability
Board of Directors Audit Committee [(a)]	– Oversight of financial statement integrity, regulatory and legal requirements, independent auditors' qualifications and independence, and the performance of the internal audit function and independent auditors – Financial reporting, legal matters, and fraud risk	– Meets with management and approves significant policies relating to the risk areas overseen by the Audit Committee – Receives reports on enterprise risk – Meets bi-monthly – Convenes to discuss the content of our financial disclosures and quarterly earnings releases
Board of Directors Risk Committee [(a)]	– Assist the Board in oversight of strategies, policies, procedures, and practices relating to the assessment and management of enterprise-wide risk, including credit, market, liquidity, model, operational, compliance, reputation, and strategic risks – Assist the Board in overseeing risks related to capital adequacy, capital planning, and capital actions	– Reviews and provides oversight of management's activities related to the enterprise-wide risk management framework, which includes an annual review of the ERM Policy, including the Risk Appetite Statement, and management and ERM reports – Approves any material changes to the charter of the ERM Committee and significant policies relating to risk management, including corporate risk tolerances for major risk categories
ERM Committee	– Chaired by the Chief Executive Officer and comprising other senior level executives – Manage risk and ensure that the corporate risk profile is managed in a manner consistent with our risk appetite – Oversees the ERM Program, which encompasses our risk philosophy, policy, framework, and governance structure for the management of risks across the entire company	– Approves and manages the risk-adjusted capital framework we use to manage risks
Disclosure Committee	– Includes representatives from each of the Three Lines of Defense – Meets quarterly to review recent internal and external events to determine whether all appropriate disclosures have been made in reports filed with the SEC	– Convenes quarterly to discuss the content of our 10-Q and 10-K
Tier 2 Risk Governance Committees	– Include attendees from each of the Three Lines of Defense – The First Line of Defense is the line of business primarily responsible to accept, own, proactively identify, monitor, and manage risk – The Second Line of Defense comprises Risk Management representatives who provide independent, centralized oversight over all risk categories by aggregating, analyzing, and reporting risk information – Risk Review, our internal audit function, provides the Third Line of Defense. Its role is to provide independent assessment and testing of the effectiveness of, appropriateness of, and adherence to KeyCorp's risk management policies, practices, and controls	– Supports the ERM Committee by identifying early warning events and trends, escalating emerging risks, and discussing forward-looking assessments
Chief Risk Officer	– Ensure that relevant risk information is properly integrated into strategic and business decisions – Ensure appropriate ownership of risks	– Provides input into performance and compensation decisions – Assesses aggregate enterprise risk – Monitors capabilities to manage critical risks – Executes appropriate Board and stakeholder reporting

(a) The Audit and Risk Committees meet jointly, as appropriate, to discuss matters that relate to each committee's responsibilities. Committee chairpersons routinely meet with management during interim months to plan agendas for upcoming meetings and to discuss emerging trends and events that have transpired since the preceding meeting. All members of the Board receive formal reports designed to keep them abreast of significant developments during the interim months.

Market risk management

Market risk is the risk that movements in market risk factors, including interest rates, foreign exchange rates, equity prices, commodity prices, credit spreads, and volatilities will reduce Key's income and the value of its portfolios. These factors influence prospective yields, values, or prices associated with the instrument. We are exposed to market risk both in our trading and nontrading activities, which include asset and liability management activities. Information regarding our fair value policies, procedures, and methodologies is provided in Note 1 ("Summary of Significant Accounting Policies") under the heading "Fair Value Measurements" and Note 6 ("Fair Value Measurements") in this report.

Trading market risk

Key incurs market risk as a result of trading activities that are used in support of client facilitation and hedging activities, principally within our investment banking and capital markets businesses. Key has exposures to a wide range of risk factors including interest rates, equity prices, foreign exchange rates, credit spreads, and commodity prices, as well as the associated implied volatilities and spreads. Our primary market risk exposures are a result of trading and hedging activities in the derivative and fixed income markets, including securitization exposures. At December 31, 2019, we did not have any re-securitization positions. We maintain modest trading inventories to facilitate customer flow, make markets in securities, and hedge certain risks including but not limited to credit risk and interest rate risk. The risks associated with these activities are mitigated in accordance with the Market Risk hedging policy. The majority of our positions are traded in active markets.

Management of trading market risks. Market risk management is an integral part of Key's risk culture. The Risk Committee of our Board provides oversight of trading market risks. The ERM Committee and the Market Risk Committee regularly review and discuss market risk reports prepared by our MRM that contain our market risk exposures and results of monitoring activities. Market risk policies and procedures have been defined and approved by the Market Risk Committee, a Tier 2 Risk Governance Committee, and take into account our tolerance for risk and consideration for the business environment.

The MRM, as the second line of defense, is an independent risk management function that partners with the lines of business to identify, measure, and monitor market risks throughout our company. The MRM is responsible for ensuring transparency of significant market risks, monitoring compliance with established limits, and escalating limit exceptions to appropriate senior management. The various business units and trading desks are responsible for ensuring that market risk exposures are well-managed and prudent. Market risk is monitored through various measures, such as VaR, and through routine stress testing, sensitivity, and scenario analyses. The MRM conducts stress tests for each position using historical worst case and standard shock scenarios. VaR, stressed VaR, and other analyses are prepared daily and distributed to appropriate management.

Covered positions. We monitor the market risk of our covered positions as defined in the Market Risk Rule, which includes all of our trading positions as well as all foreign exchange and commodity positions, regardless of whether the position is in a trading account. Key's covered positions may also include mortgage-backed and asset-backed securities that may be identified as securitization positions or re-securitization positions under the Market Risk Rule. The MRM as well as the LOB that trades securitization positions monitor the positions, the portfolio composition and the risks identified in this section on a daily basis consistent with the Market Risk policies and procedures. At December 31, 2019, covered positions did not include any re-securitization positions. Instruments that are used to hedge nontrading activities, such as bank-issued debt and loan portfolios, equity positions that are not actively traded, and securities financing activities, do not meet the definition of a covered position. The MRM is responsible for identifying our portfolios as either covered or non-covered. The Covered Position Working Group develops the final list of covered positions, and a summary is provided to the Market Risk Committee.

Our significant portfolios of covered positions are detailed below. We analyze market risk by portfolios of covered positions and do not separately measure and monitor our portfolios by risk type. The descriptions below incorporate the respective risk types associated with each of these portfolios.

- Fixed income includes those instruments associated with our capital markets business and the trading of securities as a dealer. These instruments may include positions in municipal bonds, bonds backed by the U.S. government, agency and corporate bonds, certain mortgage-backed and asset-backed securities, securities issued by the U.S. Treasury, money markets, and certain CMOs. The activities and instruments within the fixed income portfolio create exposures to interest rate and credit spread risks.
- Interest rate derivatives include interest rate swaps, caps, and floors, which are transacted primarily to accommodate the needs of commercial loan clients. In addition, we enter into interest rate derivatives to offset or mitigate the interest rate risk related to the client positions. The activities within this portfolio create exposures to interest rate risk.

VaR and stressed VaR. VaR is the estimate of the maximum amount of loss on an instrument or portfolio due to adverse market conditions during a given time interval within a stated confidence level. Stressed VaR is used to assess extreme conditions on market risk within our trading portfolios. The MRM calculates VaR and stressed VaR on a daily basis, and the results are distributed to appropriate management. VaR and stressed VaR results are also provided to our regulators and utilized in regulatory capital calculations.

We use a historical simulation VaR model to measure the potential adverse effect of changes in interest rates, foreign exchange rates, equity prices, and credit spreads on the fair value of our covered positions and other non-covered positions. Historical scenarios are customized for specific positions, and numerous risk factors are incorporated in the calculation. Additional consideration is given to the risk factors to estimate the exposures that contain optionality features, such as options and cancelable provisions. VaR is calculated using daily observations over a one-year time horizon, and approximates a 95% confidence level. Statistically, this means that we would expect to incur losses greater than VaR, on average, five out of 100 trading days, or three to four times each quarter. We also calculate VaR and stressed VaR at a 99% confidence level.

The VaR model is an effective tool in estimating ranges of possible gains and losses on our positions. However, there are limitations inherent in the VaR model since it uses historical results over a given time interval to estimate future performance. Historical results may not be indicative of future results, and changes in the market or composition of our portfolios could have a significant impact on the accuracy of the VaR model. We regularly review and enhance the modeling techniques, inputs, and assumptions used. Our market risk policy includes the independent validation of our VaR model by Key's internal model validation group on an annual basis. The Model Risk Committee oversees the Model Validation Program, and results of validations are discussed with the ERM Committee.

Actual losses for the total covered positions did not exceed aggregate daily VaR on any day during the quarters ended December 31, 2019, and December 31, 2018. The MRM backtests our VaR model on a daily basis to evaluate its predictive power. The test compares VaR model results at the 99% confidence level to daily held profit and loss. Results of backtesting are provided to the Market Risk Committee. Backtesting exceptions occur when trading losses exceed VaR. We do not engage in correlation trading or utilize the internal model approach for measuring default and credit migration risk. Our net VaR approach incorporates diversification, but our VaR calculation does not include the impact of counterparty risk and our own credit spreads on derivatives.

The aggregate VaR at the 99% confidence level with a one day holding period for all covered positions was $.9 million at December 31, 2019, and $.8 million at December 31, 2018. Figure 25 summarizes our VaR at the 99% confidence level with a one day holding period for significant portfolios of covered positions for the three months ended December 31, 2019, and December 31, 2018.

Figure 25. VaR for Significant Portfolios of Covered Positions

	2019				2018			
	Three months ended December 31,				Three months ended December 31,			
in millions	High	Low	Mean	December 31,	High	Low	Mean	December 31,
Trading account assets:								
Fixed income	**$ 1.2**	**$ .6**	**$ .9**	**$ .8**	$ .8	$ .3	$ .6	$ .6
Derivatives:								
Interest rate	**$ .1**	**.1**	**$ .1**	**$ .1**	$ .2	.1	$ .1	$ .1

Stressed VaR is calculated by running the portfolios through a predetermined stress period which is approved by the Market Risk Committee and is calculated at the 99% confidence level using the same model and assumptions used for general VaR. The aggregate stressed VaR for all covered positions was $5.1 million at December 31, 2019, and at December 31, 2018. Figure 26 summarizes our stressed VaR at the 99% confidence level with a one day holding period for significant portfolios of covered positions for the three months ended December 31, 2019, and December 31, 2018.

Figure 26. Stressed VaR for Significant Portfolios of Covered Positions

	2019				2018			
	Three months ended December 31,				Three months ended December 31,			
in millions	High	Low	Mean	December 31,	High	Low	Mean	December 31,
Trading account assets:								
Fixed income	**$ 5.7**	**$ 3.2**	**$ 4.5**	**$ 4.3**	$ 5.6	$ 3.6	$ 4.6	$ 3.9
Derivatives:								
Interest rate	**$ 1.2**	**$ .2**	**$ .4**	**$ .7**	$ .9	$ .5	$ .6	$ .6

Internal capital adequacy assessment. Market risk is a component of our internal capital adequacy assessment. Our risk-weighted assets include a market risk-equivalent asset amount, which consists of a VaR component, stressed VaR component, a de minimis exposure amount, and a specific risk add-on including the securitization positions. The aggregate market value of the securitization positions as defined by the Market Risk Rule was $44.9 million at December 31, 2019. This amount included $16.3 million of mortgage-backed securities positions and $28.6 million of asset-backed securities positions. Specific risk is the price risk of individual financial instruments, which is not accounted for by changes in broad market risk factors and is measured through a standardized approach. Market risk weighted assets, including the specific risk calculations, are run quarterly by the MRM in accordance with the Market Risk Rule and approved by the Chief Market Risk Officer.

Nontrading market risk

Most of our nontrading market risk is derived from interest rate fluctuations and its impacts on our traditional loan and deposit products, as well as investments, hedging relationships, long-term debt, and certain short-term borrowings. Interest rate risk, which is inherent in the banking industry, is measured by the potential for fluctuations in net interest income and the EVE. Such fluctuations may result from changes in interest rates and differences in the repricing and maturity characteristics of interest-earning assets and interest-bearing liabilities. We manage the exposure to changes in net interest income and the EVE in accordance with our risk appetite and in accordance with the Board approved ERM policy.

Interest rate risk positions are influenced by a number of factors, including the balance sheet positioning that arises out of customer preferences for loan and deposit products, economic conditions, the competitive environment within our markets, changes in market interest rates that affect client activity, and our hedging, investing, funding, and capital positions. The primary components of interest rate risk exposure consist of reprice risk, basis risk, yield curve risk, and option risk.

- ***“Reprice risk*”** is the exposure to changes in the level of interest rates and occurs when the volume of interest-bearing liabilities and the volume of interest-earning assets they fund (e.g., deposits used to fund loans) do not mature or reprice at the same time.
- ***“Basis risk”*** is the exposure to asymmetrical changes in interest rate indexes and occurs when floating-rate assets and floating-rate liabilities reprice at the same time, but in response to different market factors or indexes.
- ***“Yield curve risk”*** is the exposure to non-parallel changes in the slope of the yield curve (where the yield curve depicts the relationship between the yield on a particular type of security and its term to maturity) and occurs when interest-bearing liabilities and the interest-earning assets that they fund do not price or reprice to the same term point on the yield curve.
- ***“Option risk”*** is the exposure to a customer or counterparty’s ability to take advantage of the interest rate environment and terminate or reprice one of our assets, liabilities, or off-balance sheet instruments prior to contractual maturity without a penalty. Option risk occurs when exposures to customer and counterparty early withdrawals or prepayments are not mitigated with an offsetting position or appropriate compensation.

The management of nontrading market risk is centralized within Corporate Treasury. The Risk Committee of our Board provides oversight of nontrading market risk. The ERM Committee and the ALCO review reports on the interest rate risk exposures described above. In addition, the ALCO reviews reports on stress tests and sensitivity analyses related to interest rate risk. These committees have various responsibilities related to managing nontrading market risk, including recommending, approving, and monitoring strategies that maintain risk positions within approved tolerance ranges. The A/LM policy provides the framework for the oversight and management of interest rate risk and is administered by the ALCO. The MRM, as the second line of defense, provides additional oversight.

Net interest income simulation analysis. The primary tool we use to measure our interest rate risk is simulation analysis. For purposes of this analysis, we estimate our net interest income based on the current and projected composition of our on- and off-balance sheet positions, accounting for recent and anticipated trends in customer activity. The analysis also incorporates assumptions for the current and projected interest rate environments and balance sheet growth projections based on a most likely macroeconomic view. The results of this simulation analysis reflect management's desired interest rate risk positioning. The modeling incorporates investment portfolio and swap portfolio balances consistent with management's desired interest rate risk positioning. The simulation model estimates the amount of net interest income at risk by simulating the change in net interest income that would occur if rates were to gradually increase or decrease over the next 12 months (subject to a 25 basis point floor in rates).

Figure 27 presents the results of the simulation analysis at December 31, 2019, and December 31, 2018. At December 31, 2019, our simulated impact to changes in interest rates was modest. The asset sensitive position declined from 2018 as a result of hedging actions executed to guide the position closer to neutral over time. Tolerance levels for risk management require the development of remediation plans to maintain residual risk within tolerance if simulation modeling demonstrates that a gradual, parallel 200 basis point increase or 200 basis point decrease (subject to a 25 basis point floor in rates) in interest rates over the next 12 months would adversely affect net interest income over the same period by more than 5.5%. Current modeled exposure is within Board approved tolerances.

Figure 27. Simulated Change in Net Interest Income

	December 31, 2019		December 31, 2018	
Basis point change assumption (short-term rates)	**-150**	**+200**	-200	+200
Tolerance level	**-5.50 %**	**-5.50 %**	-5.50 %	-5.50 %
Interest rate risk assessment	**-2.47 %**	**-1.45 %**	-4.89 %	2.22 %

Simulation analysis produces a sophisticated estimate of interest rate exposure based on assumptions input into the model. We tailor certain assumptions to the specific interest rate environment and yield curve shape being modeled and validate those assumptions on a regular basis. However, actual results may differ from those derived in simulation analysis due to unanticipated changes to the balance sheet composition, customer behavior, product pricing, market interest rates, changes in management's desired interest rate risk positioning, investment, funding and hedging activities, and repercussions from unanticipated or unknown events.

We also perform regular stress tests and sensitivity analyses on the model inputs that could materially change the resulting risk assessments. Assessments are performed using different shapes of the yield curve, including steepening or flattening of the yield curve, immediate changes in market interest rates, and changes in the relationship of money market interest rates. Assessments are also performed on changes to the following assumptions: loan and deposit balances, the pricing of deposits without contractual maturities, changes in lending spreads, prepayments on loans and securities, investment, funding and hedging activities, and liquidity and capital management strategies.

The results of additional assessments indicate that net interest income could increase or decrease from the base simulation results presented in Figure 27. Net interest income is highly dependent on the timing, magnitude, frequency, and path of interest rate increases and the associated assumptions for deposit repricing relationships, lending spreads, and the balance behavior of transaction accounts. If fixed rate assets increase by $1 billion, or fixed rate liabilities decrease by $1 billion, then the benefit to rising rates would decrease by approximately 25 basis points. If the interest-bearing liquid deposit beta assumption increases or decreases by 5% (e.g., 40% to 45%), then the benefit to rising rates would decrease or increase by approximately 95 basis points.

Our current interest rate risk position could fluctuate to higher or lower levels of risk depending on the competitive environment and client behavior that may affect the actual volume, mix, maturity, and repricing characteristics of loan and deposit flows. Corporate Treasury discretionary activities related to funding, investing, and hedging may also change as a result of changes in customer business flows or changes in management's desired interest rate risk positioning. As changes occur to both the configuration of the balance sheet and the outlook for the economy, management proactively evaluates hedging opportunities that may change our interest rate risk profile.

We also conduct simulations that measure the effect of changes in market interest rates in the second and third years of a three-year horizon. These simulations are conducted in a manner similar to those based on a 12-month horizon. To capture longer-term exposures, we calculate exposures to changes of the EVE as discussed in the following section.

Economic value of equity modeling. EVE complements net interest income simulation analysis as it estimates risk exposure beyond 12-, 24-, and 36-month horizons. EVE modeling measures the extent to which the economic values of assets, liabilities, and off-balance sheet instruments may change in response to fluctuations in interest rates. EVE is calculated by subjecting the balance sheet to an immediate 200 basis point increase or decrease in interest rates, measuring the resulting change in the values of assets, liabilities, and off-balance sheet instruments, and comparing those amounts with the base case of the current interest rate environment. This analysis is highly dependent upon assumptions applied to assets and liabilities with non-contractual maturities. Those assumptions are based on historical behaviors, as well as our expectations. We develop remediation plans that would maintain residual risk within tolerance if this analysis indicates that our EVE will decrease by more than 15% in response to an immediate increase or decrease in interest rates. We are operating within these guidelines as of December 31, 2019.

Management of interest rate exposure. We use the results of our various interest rate risk analyses to formulate A/LM strategies to achieve the desired risk profile while managing to our objectives for capital adequacy and liquidity risk exposures. Specifically, we manage interest rate risk positions by purchasing securities, issuing term debt with floating or fixed interest rates, and using derivatives. We predominantly use interest rate swaps and options, which modify the interest rate characteristics of certain assets and liabilities.

Figure 28 shows all derivative positions that we hold for A/LM purposes. The swap positions are used to convert the contractual interest rate index of agreed-upon amounts of assets and liabilities (i.e., notional amounts) to another interest rate index. For example, fixed-rate debt is converted to a floating rate through a “receive fixed/pay variable” interest rate swap. The volume, maturity, and mix of portfolio swaps change frequently as we adjust our broader A/LM objectives and the balance sheet positions to be hedged. For more information about how we use interest rate swaps to manage our risk profile, see Note 8 (“Derivatives and Hedging Activities”).

Figure 28. Portfolio Swaps and Options by Interest Rate Risk Management Strategy

	December 31, 2019					December 31, 2018	
			Weighted-Average				
dollars in millions	Notional Amount	Fair Value	Maturity (Years)	Receive Rate	Pay Rate	Notional Amount	Fair Value
Receive fixed/pay variable — conventional A/LM [a]	$ 19,270	$ 312	2.1	2.3%	1.7%	$ 10,720	$ (87)
Receive fixed/pay variable — conventional debt	8,189	240	3.2	2.2	1.7	9,923	(7)
Receive fixed/pay variable — forward A/LM	3,400	32	1.9	1.9	1.8	3,050	45
Pay fixed/receive variable — conventional debt	50	(7)	8.5	2.1	3.6	50	(4)
Total portfolio swaps	$ 30,909	$ 577 [c]	2.4	2.2%	1.7%	$ 23,743	$ (53) [c]
Floors — conventional A/LM — purchased [b]	$ 4,200	$ 149	2.0	—	—	$ 4,760	—
Floors — conventional A/LM — sold [b]	3,900	(15)	2.0	—	—	—	—
Total floors	$ 8,100	$ 134	2.0	—	—	$ 4,760	—

(a) Portfolio swaps designated as A/LM are used to manage interest rate risk tied to both assets and liabilities.
(b) Conventional A/LM floors do not have a stated receive rate or pay rate and are given a strike price on the option.
(c) Excludes accrued interest of $543 million and $114 million at December 31, 2019, and December 31, 2018, respectively.

Liquidity risk management

Liquidity risk, which is inherent in the banking industry, is measured by our ability to accommodate liability maturities and deposit withdrawals, meet contractual obligations, and fund new business opportunities at a reasonable cost, in a timely manner, and without adverse consequences. Liquidity management involves maintaining sufficient and diverse sources of funding to accommodate planned, as well as unanticipated, changes in assets and liabilities under both normal and adverse conditions.

Governance structure

We manage liquidity for all of our affiliates on an integrated basis. This approach considers the unique funding sources available to each entity, as well as each entity’s capacity to manage through adverse conditions. The approach also recognizes that adverse market conditions or other events that could negatively affect the availability or cost of liquidity will affect the access of all affiliates to sufficient wholesale funding.

The management of consolidated liquidity risk is centralized within Corporate Treasury. Oversight and governance is provided by the Board, the ERM Committee, the ALCO, and the Chief Risk Officer. The Asset Liability Management Policy provides the framework for the oversight and management of liquidity risk and is administered by the ALCO. The Corporate Treasury Oversight group within the MRM, as the second line of defense, provides additional oversight. Our current liquidity risk management practices are in compliance with the Federal Reserve Board’s Enhanced Prudential Standards.

These committees regularly review liquidity and funding summaries, liquidity trends, peer comparisons, variance analyses, liquidity projections, hypothetical funding erosion stress tests, and goal tracking reports. The reviews generate a discussion of positions, trends, and directives on liquidity risk and shape a number of our decisions. When liquidity pressure is elevated, positions are monitored more closely and reporting is more intensive. To ensure that emerging issues are identified, we also communicate with individuals inside and outside of the company on a daily basis.

Factors affecting liquidity

Our liquidity could be adversely affected by both direct and indirect events. An example of a direct event would be a downgrade in our public credit ratings by a rating agency. Examples of indirect events (events unrelated to us) that could impair our access to liquidity would be an act of terrorism or war, natural disasters, global pandemics, political events, or the default or bankruptcy of a major corporation, mutual fund or hedge fund. Similarly, market speculation, or rumors about us or the banking industry in general, may adversely affect the cost and availability of normal funding sources.

Our credit ratings at December 31, 2019, are shown in Figure 29. We believe these credit ratings, under normal conditions in the capital markets, will enable KeyCorp or KeyBank to issue fixed income securities to investors.

Figure 29. Credit Ratings

December 31, 2019	Short-Term Borrowings	Long-Term Deposits	Senior Long-Term Debt	Subordinated Long-Term Debt	Capital Securities	Preferred Stock
KEYCORP (THE PARENT COMPANY)						
Standard & Poor's	A-2	N/A	BBB+	BBB	BB+	BB+
Moody's	P-2	N/A	Baa1	Baa1	Baa2	Baa3
Fitch	F1	N/A	A-	BBB+	BB+	BB
DBRS	R-1(low)	N/A	A	A (low)	A (low)	BBB
KEYBANK						
Standard & Poor's	A-2	N/A	A-	BBB+	N/A	N/A
Moody's	P-2	Aa3	A3	Baa1	N/A	N/A
Fitch	F1	A	A-	BBB+	N/A	N/A
DBRS	R-1(middle)	A (high)	A (high)	A	N/A	N/A

Managing liquidity risk

Most of our liquidity risk is derived from our lending activities, which inherently places funds into illiquid assets. Liquidity risk is also derived from our deposit gathering activities and the ability of our customers to withdraw funds that do not have a stated maturity or to withdraw funds before their contractual maturity. The assessments of liquidity risk are measured under the assumption of normal operating conditions as well as under a stressed environment. We manage these exposures in accordance with our risk appetite, and within Board-approved policy limits.

We regularly monitor our liquidity position and funding sources and measure our capacity to obtain funds in a variety of hypothetical scenarios in an effort to maintain an appropriate mix of available and affordable funding. In the normal course of business, we perform a monthly hypothetical funding erosion stress test for both KeyCorp and KeyBank. In a "heightened monitoring mode," we may conduct the hypothetical funding erosion stress tests more frequently, and use assumptions to reflect the changed market environment. Our testing incorporates estimates for loan and deposit lives based on our historical studies. Erosion stress tests analyze potential liquidity scenarios under various funding constraints and time periods. Ultimately, they determine the periodic effects that major direct and indirect events would have on our access to funding markets and our ability to fund our normal operations. To compensate for the effect of these assumed liquidity pressures, we consider alternative sources of liquidity and maturities over different time periods to project how funding needs would be managed.

We maintain a Contingency Funding Plan that outlines the process for addressing a liquidity crisis. The plan provides for an evaluation of funding sources under various market conditions. It also assigns specific roles and responsibilities for managing liquidity through a problem period. As part of the plan, we maintain on-balance sheet liquid reserves referred to as our liquid asset portfolio, which consists of high quality liquid assets. During a problem period, that reserve could be used as a source of funding to provide time to develop and execute a longer-term strategy. The liquid asset portfolio at December 31, 2019, totaled $25.2 billion, consisting of $24.0 billion of unpledged securities, $140 million of securities available for secured funding at the FHLB, and $1.1 billion of net balances of federal funds sold and balances in our Federal Reserve account. The liquid asset portfolio can fluctuate due to excess liquidity, heightened risk, or prefunding of expected outflows, such as debt maturities. Additionally, as of December 31, 2019, our unused borrowing capacity secured by loan collateral was $25.2 billion at the Federal

Reserve Bank of Cleveland and $8.0 billion at the FHLB of Cincinnati. In 2019, Key’s outstanding FHLB of Cincinnati advances decreased by $1.0 billion due to paydowns.

Long-term liquidity strategy

Our long-term liquidity strategy is to be predominantly funded by core deposits. However, we may use wholesale funds to sustain an adequate liquid asset portfolio, meet daily cash demands, and allow management flexibility to execute business initiatives. Key’s client-based relationship strategy provides for a strong core deposit base that, in conjunction with intermediate and long-term wholesale funds managed to a diversified maturity structure and investor base, supports our liquidity risk management strategy. We use the loan-to-deposit ratio as a metric to monitor these strategies. Our target loan-to-deposit ratio is 90-100% (at December 31, 2019, our loan-to-deposit ratio was 87%), which we calculate as the sum of total loans, loans held for sale, and nonsecuritized discontinued loans divided by deposits.

Sources of liquidity

Our primary sources of liquidity include customer deposits, wholesale funding, and liquid assets. If the cash flows needed to support operating and investing activities are not satisfied by deposit balances, we rely on wholesale funding or on-balance sheet liquid reserves. Conversely, excess cash generated by operating, investing, and deposit-gathering activities may be used to repay outstanding debt or invest in liquid assets.

Liquidity programs

We have several liquidity programs, which are described in Note 20 (“Long-Term Debt”), that are designed to enable KeyCorp and KeyBank to raise funds in the public and private debt markets. The proceeds from most of these programs can be used for general corporate purposes, including acquisitions. These liquidity programs are reviewed from time to time by the Board and are renewed and replaced as necessary. There are no restrictive financial covenants in any of these programs.

On February 1, 2019, KeyBank issued $600 million of 3.300% Senior Bank Notes due February 1, 2022, and $400 million of Floating Rate Senior Bank Notes due February 1, 2022. On March 13, 2019, KeyBank issued $350 million of 3.900% Subordinated Bank Notes due April 13, 2029.

Liquidity for KeyCorp

The primary source of liquidity for KeyCorp is from subsidiary dividends, primarily from KeyBank. KeyCorp has sufficient liquidity when it can service its debt; support customary corporate operations and activities (including acquisitions); support occasional guarantees of subsidiaries’ obligations in transactions with third parties at a reasonable cost, in a timely manner, and without adverse consequences; and fund capital distributions in the form of dividends and share buybacks.

We use a parent cash coverage months metric as the primary measure to assess parent company liquidity. The parent cash coverage months metric measures the number of months into the future where projected obligations can be met with the current quantity of liquidity. We generally issue term debt to supplement dividends from KeyBank to manage our liquidity position at or above our targeted levels. The parent company generally maintains cash and short-term investments in an amount sufficient to meet projected debt maturities over at least the next 24 months. At December 31, 2019, KeyCorp held $3.8 billion in cash, which we projected to be sufficient to meet our projected obligations, including the repayment of our maturing debt obligations for the periods prescribed by our risk tolerance.

Typically, KeyCorp meets its liquidity requirements through regular dividends from KeyBank, supplemented with term debt. Federal banking law limits the amount of capital distributions that a bank can make to its holding company without prior regulatory approval. A national bank’s dividend-paying capacity is affected by several factors, including net profits (as defined by statute) for the two previous calendar years and for the current year, up to the date of dividend declaration. During 2019, KeyBank paid $1.2 billion in cash dividends to KeyCorp. At January 1, 2020, KeyBank had regulatory capacity to pay $920 million in dividends to KeyCorp without prior regulatory approval.

On April 29, 2019, KeyCorp issued $450 million of 5.625% fixed-for-life Perpetual Preferred Stock.

On September 11, 2019, KeyCorp issued $750 million of 2.550% Senior Notes due October 1, 2029, under its Medium-Term Note Program.

On October 21, 2019, KeyCorp redeemed for cash all of the outstanding $300 million aggregate principal amount of its 6.750% Senior Notes due March 19, 2020.

On February 6, 2020, KeyCorp issued $800 million of 2.250% Senior Notes due April 6, 2027, under its Medium-Term Note Program.

Our liquidity position and recent activity

Over the past 12 months, our liquid asset portfolio, which includes overnight and short-term investments, as well as unencumbered, high quality liquid securities held as protection against a range of potential liquidity stress scenarios, has increased as a result of an increase in unpledged securities, partially offset by lower balances held at the Federal Reserve. The liquid asset portfolio continues to exceed the amount that we estimate would be necessary to manage through an adverse liquidity event by providing sufficient time to develop and execute a longer-term solution.

From time to time, KeyCorp or KeyBank may seek to retire, repurchase, or exchange outstanding debt, capital securities, preferred shares, or Common Shares through cash purchase, privately negotiated transactions or other means. Additional information on repurchases of Common Shares by KeyCorp is included in Part II, Item 5. Market for the Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities of this report. Such transactions depend on prevailing market conditions, our liquidity and capital requirements, contractual restrictions, regulatory requirements, and other factors. The amounts involved may be material, individually or collectively.

The Consolidated Statements of Cash Flows summarize our sources and uses of cash by type of activity for the years ended December 31, 2019, and December 31, 2018.

Credit risk management

Credit risk is the risk of loss to us arising from an obligor’s inability or failure to meet contractual payment or performance terms. Like other financial services institutions, we make loans, extend credit, purchase securities, add financial and payments products, and enter into financial derivative contracts, all of which have related credit risk.

Credit policy, approval, and evaluation

We manage credit risk exposure through a multifaceted program. The Credit Risk Committee approves management credit policies and recommends significant credit policies to the Enterprise Risk Management Committee, the KeyBank Board, and the Risk Committee of the Board for approval. These policies are communicated throughout the organization to foster a consistent approach to granting credit.

Our credit risk management team and certain individuals within our lines of business, to whom credit risk management has delegated limited credit authority, are responsible for credit approval. Individuals with assigned credit authority are authorized to grant exceptions to credit policies. It is not unusual to make exceptions to established policies when mitigating circumstances dictate, however, a corporate level tolerance has been established to keep exceptions at an acceptable level based upon portfolio and economic considerations.

Our credit risk management team uses risk models to evaluate consumer loans. These models, known as scorecards, forecast the probability of serious delinquency and default for an applicant. The scorecards are embedded in the application processing system, which allows for real-time scoring and automated decisions for many of our products. We periodically validate the loan grading and scoring processes.

We maintain an active concentration management program to mitigate concentration risk in our credit portfolios. For individual obligors, we employ a sliding scale of exposure, known as hold limits, which is dictated by the type of loan and strength of the borrower.

Allowance for loan and lease losses

We estimate the appropriate level of the ALLL on at least a quarterly basis. The methodology used is described in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Allowance for Loan and Lease Losses.” Briefly, our allowance applies incurred loss rates to existing loans with similar risk characteristics. We exercise judgment to assess any adjustment to the incurred loss rates for the impact of factors such as changes in economic conditions, lending policies including underwriting standards, and the level of credit risk associated with specific industries and markets. As described in Note 1, (“Summary of Significant Accounting Policies”), on January 1, 2020, we adopted ASC 326, *Financial Instruments — Credit Losses,* and as such, an expected credit loss methodology, specifically current expected credit losses for the remaining life of our loans and leases, will be used to estimate the appropriate level of the ALLL. The ALLL at December 31, 2019, represents our best estimate of the probable credit losses inherent in the loan portfolio at that date. For more information about impaired loans, see Note 5 (“Asset Quality”).

As shown in Figure 30, our ALLL from continuing operations increased by $17 million, or 1.9%, from December 31, 2018. Our commercial ALLL increased by $8 million, or 1.1%, from December 31, 2018, primarily due to loan growth over the period and risk rating migration. Our consumer ALLL increased by $9 million, or 6.4%, from December 31, 2018. The consumer ALLL increase was primarily due to loan growth and modest shifts in credit quality metrics.

Figure 30. Allocation of the Allowance for Loan and Lease Losses

	2019			2018			2017		
December 31, *dollars in millions*	Total Allowance	Percent of Allowance to Total Allowance	Percent of Loan Type to Total Loans	Total Allowance	Percent of Allowance to Total Allowance	Percent of Loan Type to Total Loans	Total Allowance	Percent of Allowance to Total Allowance	Percent of Loan Type to Total Loans
Commercial and industrial	**$ 551**	**61.2%**	**51.0%**	$ 532	60.2%	51.1%	$ 529	60.3%	48.4%
Commercial real estate:									
Commercial mortgage	**143**	**15.9**	**14.3**	142	16.1	15.9	133	15.2	16.3
Construction	**22**	**2.4**	**1.6**	33	3.8	1.9	30	3.4	2.3
Total commercial real estate loans	**165**	**18.3**	**15.9**	175	19.9	17.8	163	18.6	18.6
Commercial lease financing	**35**	**3.9**	**5.0**	36	4.1	5.1	43	4.9	5.6
Total commercial loans	**751**	**83.4**	**71.9**	743	84.2	74.0	735	83.8	72.6
Real estate — residential mortgage	**7**	**.8**	**7.4**	7	.8	6.2	7	0.8	6.3
Home equity loans	**31**	**3.5**	**10.9**	35	3.9	12.4	43	4.9	13.9
Consumer direct loans	**34**	**3.8**	**3.7**	30	3.4	2.0	28	3.2	2.1
Credit cards	**47**	**5.2**	**1.2**	48	5.4	1.3	44	5.0	1.3
Consumer indirect loans	**30**	**3.3**	**4.9**	20	2.3	4.1	20	2.3	3.8
Total consumer loans	**149**	**16.6**	**28.1**	140	15.8	26.0	142	16.2	27.4
Total loans (a)	**$ 900**	**100.0%**	**100.0%**	$ 883	100.0%	100.0%	$ 877	100.0%	100.0%

	2016			2015		
	Total Allowance	Percent of Allowance to Total Allowance	Percent of Loan Type to Total Loans	Total Allowance	Percent of Allowance to Total Allowance	Percent of Loan Type to Total Loans
Commercial and industrial	$ 508	59.2%	46.2%	$ 450	56.5%	52.2%
Commercial real estate:						
Commercial mortgage	144	16.8	17.6	134	16.8	13.3
Construction	22	2.6	2.7	25	3.2	1.7
Total commercial real estate loans	166	19.4	20.3	159	20.0	15.0
Commercial lease financing	42	4.9	5.4	47	5.9	6.7
Total commercial loans	716	83.5	71.9	656	82.4	73.9
Real estate — residential mortgage	17	2.0	6.5	18	2.3	3.7
Home equity loans	54	6.3	14.7	57	7.2	17.3
Consumer direct loans	24	2.8	2.1	20	2.5	2.7
Credit cards	38	4.4	1.3	32	4.0	1.3
Consumer indirect loans	9	1.0	3.5	13	1.6	1.1
Total consumer loans	142	16.5	28.1	140	17.6	26.1
Total loans (a)	$ 858	100.0%	100.0%	$ 796	100.0%	100.0%

(a) Excludes allocations of the ALLL related to the discontinued operations of the education lending business in the amount of $10 million at December 31, 2019, $14 million at December 31, 2018, $16 million at December 31, 2017, $24 million at December 31, 2016, and $28 million at December 31, 2015.

Net loan charge-offs

Figure 31 shows the trend in our net loan charge-offs by loan type, while the composition of loan charge-offs and recoveries by type of loan is presented in Figure 32.

Over the past 12 months, net loan charge-offs increased $190 million. This increase was primarily due to $139 million of charge-offs related to a previously disclosed fraud loss. In 2020, we expect net loan charge-offs to average loans to remain below our long-term targeted range of 40 to 60 basis points.

Figure 31. Net Loan Charge-offs from Continuing Operations [(a)]

Year ended December 31, *dollars in millions*	**2019**	**2018**	**2017**	**2016**	**2015**
Commercial and industrial	**$ 292**	$ 122	$ 93	$ 107	$ 61
Real estate — commercial mortgage	**6**	18	9	(4)	(2)
Real estate — construction	**5**	(2)	1	7	—
Commercial lease financing	**21**	5	8	9	4
Total commercial loans	**324**	143	111	119	63
Real estate — residential mortgage	**1**	1	(1)	3	3
Home equity loans	**11**	10	15	16	21
Consumer direct loans	**34**	29	28	22	18
Credit cards	**37**	37	39	31	28
Consumer indirect loans	**17**	14	16	14	9
Total consumer loans	**100**	91	97	86	79
Total net loan charge-offs	**$ 424**	$ 234	$ 208	$ 205	$ 142
Net loan charge-offs to average loans	**.46%**	.26%	.24%	.29%	.24%
Net loan charge-offs from discontinued operations — education lending business	**$ 7**	$ 10	$ 18	$ 17	$ 22

(a) Credit amounts indicate that recoveries exceeded charge-offs.

Figure 32. Summary of Loan and Lease Loss Experience from Continuing Operations

Year ended December 31, *dollars in millions*	2019	2018	2017	2016	2015
Average loans outstanding	**$ 91,511**	$ 88,338	$ 86,365	$ 71,148	$ 58,594
Allowance for loan and lease losses at beginning of period	**$ 883**	$ 877	$ 858	$ 796	$ 794
Loans charged off:					
Commercial and industrial	**319**	159	133	118	77
Real estate — commercial mortgage	**8**	21	11	5	4
Real estate — construction	**5**	—	2	9	1
Total commercial real estate loans (a)	**13**	21	13	14	5
Commercial lease financing	**26**	10	14	12	11
Total commercial loans (b)	**358**	190	160	144	93
Real estate — residential mortgage	**3**	3	3	4	6
Home equity loans	**19**	21	30	30	32
Consumer direct loans	**41**	36	34	27	24
Credit cards	**44**	44	44	35	30
Consumer indirect loans	**34**	30	31	21	18
Total consumer loans	**141**	134	142	117	110
Total loans charged off	**499**	324	302	261	203
Recoveries:					
Commercial and industrial	**27**	37	40	11	16
Real estate — commercial mortgage	**2**	3	2	9	6
Real estate — construction	**—**	2	1	2	1
Total commercial real estate loans (a)	**2**	5	3	11	7
Commercial lease financing	**5**	5	6	3	7
Total commercial loans (b)	**34**	47	49	25	30
Real estate — residential mortgage	**2**	2	4	1	3
Home equity loans	**8**	11	15	14	11
Consumer direct loans	**7**	7	6	5	6
Credit cards	**7**	7	5	4	2
Consumer indirect loans	**17**	16	15	7	9
Total consumer loans	**41**	43	45	31	31
Total recoveries	**75**	90	94	56	61
Net loan charge-offs	**(424)**	(234)	(208)	(205)	(142)
Provision (credit) for loan and lease losses	**441**	240	227	267	145
Foreign currency translation adjustment	**—**	—	—	—	(1)
Allowance for loan and lease losses at end of year	**$ 900**	$ 883	$ 877	$ 858	$ 796
Liability for credit losses on lending-related commitments at beginning of the year	**$ 64**	$ 57	$ 55	$ 56	$ 35
Provision (credit) for losses on lending-related commitments	**4**	6	2	(1)	21
Liability for credit losses on lending-related commitments at end of the year (c)	**$ 68**	$ 63	$ 57	$ 55	$ 56
Total allowance for credit losses at end of the year	**$ 968**	$ 946	$ 934	$ 913	$ 852
Net loan charge-offs to average total loans	**.46%**	.26%	.24%	.29%	.24%
Allowance for loan and lease losses to period-end loans	**.95**	.99	1.01	1.00	1.33
Allowance for credit losses to period-end loans	**1.02**	1.06	1.08	1.06	1.42
Allowance for loan and lease losses to nonperforming loans	**156.0**	162.9	174.4	137.3	205.7
Allowance for credit losses to nonperforming loans	**167.8**	174.5	185.7	146.1	220.2
Discontinued operations — education lending business:					
Loans charged off	**$ 12**	$ 15	$ 26	$ 28	$ 35
Recoveries	**5**	5	8	11	13
Net loan charge-offs	**$ (7)**	$ (10)	$ (18)	$ (17)	$ (22)

(a) See Figure 12 and the accompanying discussion in the “Loans and loans held for sale” section for more information related to our commercial real estate loan portfolio.
(b) See Figure 11 and the accompanying discussion in the “Loans and loans held for sale” section for more information related to our commercial loan portfolio.
(c) Included in “accrued expense and other liabilities” on the balance sheet.

Nonperforming assets

Figure 33 shows the composition of our nonperforming assets. As shown in Figure 33, nonperforming assets increased $138 million during 2019. The increase was primarily driven by the transfer of three criticized commercial loans as well as a number of consumer residential mortgages that were moved to nonperforming loans held for sale. See Note 1 (“Summary of Significant Accounting Policies”) under the headings “Nonperforming Loans,” “Impaired Loans,” and “Allowance for Loan and Lease Losses” for a summary of our nonaccrual and charge-off policies.

Figure 33. Summary of Nonperforming Assets and Past Due Loans from Continuing Operations

December 31, *dollars in millions*	2019	2018	2017	2016	2015
Commercial and industrial	**$ 264**	$ 152	$ 153	$ 297	$ 82
Real estate — commercial mortgage	**83**	81	30	26	19
Real estate — construction	**2**	2	2	3	9
Total commercial real estate loans [a]	**85**	83	32	29	28
Commercial lease financing	**6**	9	6	8	13
Total commercial loans [b]	**355**	244	191	334	123
Real estate — residential mortgage	**48**	62	58	56	64
Home equity loans	**145**	210	229	223	190
Consumer direct loans	**4**	4	4	6	2
Credit cards	**3**	2	2	2	2
Consumer indirect loans	**22**	20	19	4	6
Total consumer loans	**222**	298	312	291	264
Total nonperforming loans [c]	**577**	542	503	625	387
Nonperforming loans held for sale	**94**	—	—	—	—
OREO	**35**	35	31	51	14
Other nonperforming assets	**9**	—	—	—	2
Total nonperforming assets [c]	**$ 715**	$ 577	$ 534	$ 676	$ 403
Accruing loans past due 90 days or more	**$ 101**	$ 112	$ 89	$ 87	$ 72
Accruing loans past due 30 through 89 days	**389**	312	359	404	208
Restructured loans — accruing and nonaccruing [d]	**347**	399	317	280	280
Restructured loans included in nonperforming loans [d]	**183**	247	189	141	159
Nonperforming assets from discontinued operations — education lending business	**7**	8	7	5	7
Nonperforming loans to period-end portfolio loans [c]	**.61%**	.61%	.58%	.73%	.65%
Nonperforming assets to period-end portfolio loans plus OREO and other nonperforming assets [c]	**.75**	.64	.62	.79	.67

(a) See Figure 12 and the accompanying discussion in the "Loans and loans held for sale" section for more information related to our commercial real estate loan portfolio.
(b) See Figure 11 and the accompanying discussion in the "Loans and loans held for sale" section for more information related to our commercial loan portfolio.
(c) Nonperforming loan balances exclude $446 million, $575 million, $738 million, $865 million, and $11 million of PCI loans at December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016, and December 31, 2015, respectively.
(d) Restructured loans (i.e., TDRs) are those for which Key, for reasons related to a borrower's financial difficulties, grants a concession to the borrower that it would not otherwise consider. See Note 5,("Asset Quality") for more information on our TDRs.

Figure 34 shows the types of activity that caused the change in our nonperforming loans during each of the last four quarters and the years ended December 31, 2019, and December 31, 2018.

Figure 34. Summary of Changes in Nonperforming Loans from Continuing Operations

		2019 Quarters				
in millions	2019	Fourth	Third	Second	First	2018
Balance at beginning of period	**$ 542**	**$ 585**	**$ 561**	**$ 548**	**$ 542**	$ 503
Loans placed on nonaccrual status	**924**	**268**	**271**	**189**	**196**	723
Charge-offs	**(380)**	**(114)**	**(91)**	**(84)**	**(91)**	(321)
Loans sold	**(57)**	**(1)**	**—**	**(38)**	**(18)**	(17)
Payments	**(141)**	**(59)**	**(37)**	**(23)**	**(22)**	(172)
Transfers to OREO	**(19)**	**(3)**	**(4)**	**(4)**	**(8)**	(24)
Transfers to nonperforming loans held for sale	**(125)**	**(47)**	**(78)**	**—**	**—**	—
Transfers to other nonperforming assets	**(13)**	**—**	**—**	**—**	**(13)**	—
Loans returned to accrual status	**(154)**	**(52)**	**(37)**	**(27)**	**(38)**	(150)
Balance at end of period [a]	**$ 577**	**$ 577**	**$ 585**	**$ 561**	**$ 548**	$ 542

(a) Nonperforming loan balances exclude $446 million and $575 million of PCI loans at December 31, 2019, and December 31, 2018, respectively.

Operational and compliance risk management

Like all businesses, we are subject to operational risk, which is the risk of loss resulting from human error or malfeasance, inadequate or failed internal processes and systems, and external events. These events include, among other things, threats to our cybersecurity, as we are reliant upon information systems and the Internet to conduct our business activities. Operational risk also encompasses compliance risk, which is the risk of loss from violations of, or noncompliance with, laws, rules and regulations, prescribed practices, and ethical standards. Under the Dodd-Frank Act, large financial companies like Key are subject to heightened prudential standards and regulation. This heightened level of regulation has increased our operational risk. Resulting operational risk losses and/or additional regulatory compliance costs could take the form of explicit charges, increased operational costs, harm to our reputation, or foregone opportunities.

We seek to mitigate operational risk through identification and measurement of risk, alignment of business strategies with risk appetite and tolerance, and a system of internal controls and reporting. We continuously strive to strengthen our system of internal controls to improve the oversight of our operational risk and to ensure compliance with laws, rules, and regulations. For example, an operational event database tracks the amounts and sources of operational risk and losses. This tracking mechanism helps to identify weaknesses and to highlight the need to take corrective action. We also rely upon software programs designed to assist in assessing operational risk and monitoring our control processes. This technology has enhanced the reporting of the effectiveness of our controls to senior management and the Board.

The Operational Risk Management Program provides the framework for the structure, governance, roles, and responsibilities, as well as the content, to manage operational risk for Key. The Compliance Risk Committee serves the same function in managing compliance risk for Key. The Operational Risk Committee supports the ERM Committee by identifying early warning events and trends, escalating emerging risks, and discussing forward-looking assessments. The Operational Risk Committee includes attendees from each of the Three Lines of Defense. Primary responsibility for managing and monitoring internal control mechanisms lies with the managers of our various lines of business. The Operational Risk Committee and Compliance Risk Committee are senior management committees that oversee our level of operational and compliance risk and direct and support our operational and compliance infrastructure and related activities. These committees and the Operational Risk Management and Compliance functions are an integral part of our ERM Program. Our Risk Review function regularly assesses the overall effectiveness of our Operational Risk Management and Compliance Programs and our system of internal controls. Risk Review reports the results of reviews on internal controls and systems to senior management and the Risk and Audit Committees and independently supports the Risk Committee’s oversight of these controls.

Cybersecurity

We maintain comprehensive Cyber Incident Response Plans, and we devote significant time and resources to maintaining and regularly updating our technology systems and processes to protect the security of our computer systems, software, networks, and other technology assets against attempts by third parties to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems, or cause other damage. We and many other U.S. financial institutions have experienced distributed denial-of-service attacks from technologically sophisticated third parties. These attacks are intended to disrupt or disable online banking services and prevent banking transactions. We also periodically experience other attempts to breach the security of our systems and data. These cyberattacks have not, to date, resulted in any material disruption of our operations or material harm to our customers, and have not had a material adverse effect on our results of operations.

Cyberattack risks may also occur with our third-party technology service providers, and may result in financial loss or liability that could adversely affect our financial condition or results of operations. Cyberattacks could also interfere with third-party providers’ ability to fulfill their contractual obligations to us. Recent high-profile cyberattacks have targeted retailers, credit bureaus, and other businesses for the purpose of acquiring the confidential information (including personal, financial, and credit card information) of customers, some of whom are customers of ours. We may incur expenses related to the investigation of such attacks or related to the protection of our customers from identity theft as a result of such attacks. We may also incur expenses to enhance our systems or processes to protect against cyber or other security incidents. Risks and exposures related to cyberattacks are expected to remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats, as well as due to the expanding use of Internet banking, mobile banking, and other technology-based products and services by us and our clients.

As described in more detail in “Risk Management — Overview” in Item 7 of this report, the Board serves in an oversight capacity ensuring that Key’s risks are managed in a manner that is effective and balanced and adds value for the shareholders. The Board’s Risk Committee has primary oversight for enterprise-wide risk at KeyCorp, including operational risk (which includes cybersecurity). The Risk Committee reviews and provides oversight of management’s activities related to the enterprise-wide risk management framework, including cyber-related risk. The ERM Committee, chaired by the Chief Executive Officer and comprising other senior level executives, is responsible for managing risk (including cyber-related risk) and ensuring that the corporate risk profile is managed in a manner consistent with our risk appetite. The ERM Committee reports to the Board’s Risk Committee.

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GAAP to Non-GAAP Reconciliations

Non-GAAP financial measures have inherent limitations, are not required to be uniformly applied, and are not audited. Although these non-GAAP financial measures are frequently used by investors to evaluate a company, they have limitations as analytical tools, and should not be considered in isolation, nor as a substitute for analyses of results as reported under GAAP.

The tangible common equity ratio and the return on tangible common equity ratio have been a focus for some investors, and management believes that these ratios may assist investors in analyzing Key's capital position without regard to the effects of intangible assets and preferred stock. Since analysts and banking regulators may assess our capital adequacy using tangible common equity, we believe it is useful to enable investors to assess our capital adequacy on these same bases.

Year ended December 31, *dollars in millions*	**2019**	**2018**	**2017**	**2016**	**2015**
Tangible common equity to tangible assets at period end					
Key shareholders' equity (GAAP)	**$ 17,038**	$ 15,595	$ 15,023	$ 15,240	$ 10,746
Less: Intangible assets [(a)]	**2,910**	2,818	2,928	2,788	1,080
Preferred Stock [(b)]	**1,856**	1,421	1,009	1,640	281
Tangible common equity (non-GAAP)	**$ 12,272**	$ 11,356	$ 11,086	$ 10,812	$ 9,385
Total assets (GAAP)	**$ 144,988**	$ 139,613	$ 137,698	$ 136,453	$ 95,131
Less: Intangible assets [(a)]	**2,910**	2,818	2,928	2,788	1,080
Tangible assets (non-GAAP)	**$ 142,078**	$ 136,795	$ 134,770	$ 133,665	$ 94,051
Tangible common equity to tangible assets ratio (non-GAAP)	**8.64%**	8.30%	8.23%	8.09%	9.98%
Average tangible common equity					
Average Key shareholders' equity (GAAP)	**$ 16,636**	$ 15,131	$ 15,224	$ 12,647	$ 10,626
Less: Intangible assets (average) [(c)]	**2,909**	2,869	2,837	1,825	1,085
Preferred Stock (average)	**1,755**	1,205	1,137	627	290
Average tangible common equity (non-GAAP)	**$ 11,972**	$ 11,057	$ 11,250	$ 10,195	$ 9,251
Return on average tangible common equity from continuing operations					
Income (loss) from continuing operations attributable to Key common shareholders (GAAP)	**$ 1,611**	$ 1,793	$ 1,219	$ 753	$ 892
Average tangible common equity (non-GAAP)	**$ 11,972**	$ 11,057	$ 11,250	$ 10,195	$ 9,251
Return on average tangible common equity from continuing operations (non-GAAP)	**13.46%**	16.22%	10.84%	7.39%	9.64%
Return on average tangible common equity consolidated					
Net income (loss) attributable to Key common shareholders (GAAP)	**$ 1,620**	$ 1,800	$ 1,226	$ 754	$ 893
Average tangible common equity (non-GAAP)	**11,972**	11,057	11,250	10,195	9,251
Return on average tangible common equity consolidated (non-GAAP)	**13.53%**	16.28%	10.90%	7.40%	9.65%

(a) For the years ended December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016, and December 31, 2015, intangible assets exclude $7 million, $14 million, $26 million, $42 million, and $45 million, respectively, of period-end purchased credit card relationships.
(b) Net of capital surplus.
(c) For the years ended December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016, and December 31, 2015, average intangible assets exclude $10 million, $20 million, $34 million, $43 million, and $55 million, respectively, of average purchased credit card relationships.

The cash efficiency ratio is a ratio of two non-GAAP performance measures. Accordingly, there is no directly comparable GAAP performance measure. The cash efficiency ratio excludes the impact of our intangible asset amortization from the calculation. We believe this ratio provides greater consistency and comparability between our results and those of our peer banks. Additionally, this ratio is used by analysts and investors to evaluate how effectively management is controlling noninterest expenses in generating revenue, as they develop earnings forecasts and peer bank analysis.

Year ended December 31, *dollars in millions*	**2019**	**2018**	**2017**	**2016**	**2015**
Cash efficiency ratio					
Noninterest expense (GAAP)	**$ 3,901**	$ 3,975	$ 4,098	$ 3,756	$ 2,840
Less: Intangible asset amortization (GAAP)	**89**	99	95	55	36
Adjusted noninterest expense (non-GAAP)	**$ 3,812**	$ 3,876	$ 4,003	$ 3,701	$ 2,804
Net interest income (GAAP)	**$ 3,909**	$ 3,909	$ 3,777	$ 2,919	$ 2,348
Plus: TE adjustment	**32**	31	53	34	28
Noninterest income (GAAP)	**2,459**	2,515	2,478	2,071	1,880
Total TE revenue (non-GAAP)	**$ 6,400**	$ 6,455	$ 6,308	$ 5,024	$ 4,256
Cash efficiency ratio (non-GAAP)	**59.6%**	60.0%	63.5%	73.7%	65.9%

Year ended December 31, *dollars in millions*		2019
Common Equity Tier 1 under the Regulatory Capital Rules		
Common Equity Tier 1 under current Regulatory Capital Rules	$	12,356
Adjustments from current Regulatory Capital Rules to the fully phased-in Regulatory Capital Rules:		
Deferred tax assets and other intangible assets [(a)]		—
Common Equity Tier 1 anticipated under the fully phased-in Regulatory Capital Rules [(b)]	$	12,356
Net risk-weighted assets under current Regulatory Capital Rules	$	130,865
Adjustments from current Regulatory Capital Rules to the fully phased-in Regulatory Capital Rules:		
Mortgage servicing assets [(c)]		878
Deferred tax assets		171
All other assets		—
Total risk-weighted assets anticipated under the fully phased-in Regulatory Capital Rules [(b)]	$	131,914
Common Equity Tier 1 ratio under the fully phased-in Regulatory Capital Rules [(b)]		9.37%

(a) Includes the deferred tax assets subject to future taxable income for realization, primarily tax credit carryforwards, as well as intangible assets (other than goodwill and mortgage servicing assets) subject to the transition provisions of the final rule.

(b) The anticipated amount of regulatory capital and risk-weighted assets is based upon the federal banking agencies' Regulatory Capital Rules (as fully phased-in on January 1, 2019); we are subject to the Regulatory Capital Rules under the "standardized approach."

(c) Item is included in the 25% exceptions bucket calculation and is risk-weighted at 250%.

Fourth Quarter Results

Figure 35 shows our financial performance for each of the past eight quarters. Highlights of our results for the fourth quarter of 2019 are summarized below.

Earnings

Our fourth quarter net income from continuing operations attributable to Key common shareholders was $439 million, or $.45 per diluted Common Share, compared to $459 million, or $.45 per diluted Common Share, for the fourth quarter of 2018.

On an annualized basis, our return on average total assets from continuing operations for the fourth quarter of 2019 was 1.27%, compared to 1.37% for the fourth quarter of 2018. The annualized return on average tangible common equity from continuing operations was 14.09% for the fourth quarter of 2019, compared to 16.40% for the year-ago quarter.

Net interest income

TE net interest income was $987 million for the fourth quarter of 2019, compared to TE net interest income of $1.0 billion for the fourth quarter of 2018. The decrease in net interest income reflects a lower net interest margin, driven by a decline in interest rates and slightly higher deposit costs. Additionally, purchase accounting accretion declined $8 million. These declines were partially offset by higher earning asset balances.

Noninterest income

Our noninterest income was $651 million for the fourth quarter of 2019, compared to $645 million for the year-ago quarter. The increase reflects higher operating lease income, as well as growth in corporate services income, driven by higher derivatives income. Investments made in Key's mortgage business continue to drive consumer mortgage income and mortgage servicing fees.

Noninterest expense

Our noninterest expense was $980 million for the fourth quarter of 2019, compared to $1.0 billion for the fourth quarter of 2018. The fourth quarter of 2019 included notable items of $22 million, which consist of a pension settlement charge of $18 million and professional fees related to a previously disclosed fraud loss of $4 million. The year-ago period included notable items of $41 million, which were efficiency-related expenses of $24 million and a pension settlement charge of $17 million. Excluding notable items, noninterest expense decreased by $13 million from the year-ago period, reflecting the successful implementation of Key's expense initiatives, which drove personnel expenses lower. These expenses were partially offset by Laurel Road acquisition expenses.

Provision for credit losses

Our provision for credit losses was $109 million for the fourth quarter of 2019, compared to $59 million for the fourth quarter of 2018. This increase was partially due to a pre-tax loss related to a previously disclosed fraud incident of $16 million. Our ALLL was $900 million, or .95% of total period-end loans, at December 31, 2019, compared to .99% at December 31, 2018.

Net loan charge-offs for the fourth quarter of 2019 totaled $99 million, or .42% of average total loans. These results compare to $60 million, or .27%, for the fourth quarter of 2018. This increase was partially due to a previously disclosed fraud incident.

Income taxes

For the fourth quarter of 2019, we recorded a tax provision from continuing operations of $75 million, compared to a tax provision of $92 million for the fourth quarter of 2018. The provision included a tax benefit of $11 million related to the reversal of a valuation allowance against federal and state capital loss carryforwards acquired from First Niagara Financial Group utilized in the quarter. The effective tax rate for the fourth quarter of 2019 was 14.0%, compared to 15.9% for the same quarter one year ago.

Our federal tax expense and effective tax rate differ from the amount that would be calculated using the federal statutory tax rate; primarily from investments in tax-advantaged assets, such as corporate-owned life insurance, tax credits associated with investments in low-income housing projects and energy related projects, and periodic adjustments to our tax reserves as described in Note 14 (“Income Taxes”).

Figure 35. Selected Quarterly Financial Data

dollars in millions, except per share amounts	2019 Quarters				2018 Quarters			
	Fourth	**Third**	**Second**	**First**	Fourth	Third	Second	First
FOR THE PERIOD								
Interest income	**$ 1,285**	**$ 1,317**	**$ 1,329**	**$ 1,304**	$ 1,297	$ 1,239	$ 1,205	$ 1,137
Interest expense	**306**	**345**	**348**	**327**	297	253	226	193
Net interest income	**979**	**972**	**981**	**977**	1,000	986	979	944
Provision for credit losses	**109**	**200**	**74**	**62**	59	62	64	61
Noninterest income	**651**	**650**	**622**	**536**	645	609	660	601
Noninterest expense	**980**	**939**	**1,019**	**963**	1,012	964	993	1,006
Income (loss) from continuing operations before income taxes	**541**	**483**	**510**	**488**	574	569	582	478
Income (loss) from continuing operations attributable to Key	**466**	**413**	**423**	**406**	482	482	479	416
Income (loss) from discontinued operations, net of taxes	**3**	**3**	**2**	**1**	2	—	3	2
Net income (loss) attributable to Key	**469**	**416**	**425**	**407**	484	482	482	418
Income (loss) from continuing operations attributable to Key common shareholders	**439**	**383**	**403**	**386**	459	468	464	402
Income (loss) from discontinued operations, net of taxes	**3**	**3**	**2**	**1**	2	—	3	2
Net income (loss) attributable to Key common shareholders	**442**	**386**	**405**	**387**	461	468	467	404
PER COMMON SHARE								
Income (loss) from continuing operations attributable to Key common shareholders	**$ .45**	**$ .39**	**$ .40**	**$ .38**	$ .45	$ .45	$ .44	$ .38
Income (loss) from discontinued operations, net of taxes	**—**	**—**	**—**	**—**	—	—	—	—
Net income (loss) attributable to Key common shareholders [a]	**.45**	**.39**	**.40**	**.38**	.45	.45	.44	.38
Income (loss) from continuing operations attributable to Key common shareholders — assuming dilution	**.45**	**.38**	**.40**	**.38**	.45	.45	.44	.38
Income (loss) from discontinued operations, net of taxes — assuming dilution	**—**	**—**	**—**	**—**	—	—	—	—
Net income (loss) attributable to Key common shareholders — assuming dilution [a]	**.45**	**.39**	**.40**	**.38**	.45	.45	.44	.38
Cash dividends paid	**.185**	**.185**	**.17**	**.17**	.17	.17	.12	.105
Book value at period end	**15.54**	**15.44**	**15.07**	**14.31**	13.90	13.33	13.29	13.07
Tangible book value at period end	**12.56**	**12.48**	**12.12**	**11.55**	11.14	10.59	10.59	10.35
Weighted-average Common Shares outstanding (000)	**973,450**	**988,319**	**999,163**	**1,006,717**	1,018,614	1,036,479	1,052,652	1,056,037
Weighted-average Common Shares and potential Common Shares outstanding (000) [b]	**984,361**	**998,328**	**1,007,964**	**1,016,504**	1,030,417	1,049,976	1,065,793	1,071,786
AT PERIOD END								
Loans	**$ 94,646**	**$ 92,760**	**$ 91,937**	**$ 90,178**	$ 89,552	$ 89,268	$ 88,222	$ 88,089
Earning assets	**130,807**	**132,160**	**130,213**	**127,296**	125,803	125,007	123,472	122,961
Total assets	**144,988**	**146,691**	**144,545**	**141,515**	139,613	138,805	137,792	137,049
Deposits	**111,870**	**111,649**	**109,946**	**108,175**	107,309	105,780	104,548	104,751
Long-term debt	**12,448**	**14,470**	**14,312**	**14,168**	13,732	13,849	13,853	13,749
Key common shareholders' equity	**15,138**	**15,216**	**15,069**	**14,474**	14,145	13,758	14,075	13,919
Key shareholders' equity	**17,038**	**17,116**	**16,969**	**15,924**	15,595	15,208	15,100	14,944
PERFORMANCE RATIOS — FROM CONTINUING OPERATIONS								
Return on average total assets	**1.27%**	**1.14%**	**1.19%**	**1.18%**	1.37%	1.40%	1.41%	1.25%
Return on average common equity	**11.40**	**9.99**	**10.94**	**10.98**	13.07	13.36	13.29	11.76
Return on average tangible common equity [c]	**14.09**	**12.38**	**13.69**	**13.69**	16.40	16.81	16.73	14.89
Net interest margin (TE)	**2.98**	**3.00**	**3.06**	**3.13**	3.16	3.18	3.19	3.15
Cash efficiency ratio [c]	**58.7**	**56.0**	**61.9**	**61.9**	59.9	58.7	58.8	62.9
PERFORMANCE RATIOS — FROM CONSOLIDATED OPERATIONS								
Return on average total assets	**1.27%**	**1.14%**	**1.19%**	**1.17%**	1.37%	1.39%	1.40%	1.24%
Return on average common equity	**11.48**	**10.07**	**11.00**	**11.01**	13.13	13.36	13.37	11.82
Return on average tangible common equity [c]	**14.19**	**12.48**	**13.75**	**13.72**	16.47	16.81	16.84	14.97
Net interest margin (TE)	**2.97**	**2.98**	**3.05**	**3.12**	3.14	3.16	3.17	3.13
Loan to deposit [d]	**86.6**	**85.3**	**86.1**	**86.1**	85.6	87.0	86.9	86.9
CAPITAL RATIOS AT PERIOD END								
Key shareholders' equity to assets	**11.75%**	**11.67%**	**11.74%**	**11.25%**	11.17%	10.96%	10.96%	10.90%
Key common shareholders' equity to assets	**10.47**	**10.40**	**10.46**	**10.25**	10.15	9.93	10.21	10.16
Tangible common equity to tangible assets [c]	**8.64**	**8.58**	**8.59**	**8.43**	8.30	8.05	8.32	8.22
Common Equity Tier 1	**9.44**	**9.48**	**9.57**	**9.81**	9.93	9.95	10.13	9.99
Tier 1 risk-based capital	**10.86**	**10.91**	**11.01**	**10.94**	11.08	11.11	10.95	10.82
Total risk-based capital	**12.79**	**12.90**	**13.03**	**12.98**	12.89	12.99	12.83	12.73
Leverage	**9.88**	**9.93**	**10.00**	**9.89**	9.89	10.03	9.87	9.76
TRUST ASSETS								
Assets under management	**$ 40,833**	**$ 39,416**	**$ 38,942**	**$ 38,742**	$ 36,775	$ 40,575	$ 39,663	$ 39,003
OTHER DATA								
Average full-time-equivalent employees	**16,537**	**16,898**	**17,206**	**17,554**	17,664	18,150	18,376	18,540
Branches	**1,098**	**1,101**	**1,102**	**1,158**	1,159	1,166	1,177	1,192

(a) EPS may not foot due to rounding.
(b) Assumes conversion of Common Share options and other stock awards and/or convertible preferred stock, as applicable.

(c) See Figure 36 entitled “Selected Quarterly GAAP to Non-GAAP Reconciliations,” which presents the computations of certain financial measures related to “tangible common equity,” and “cash efficiency.” The table reconciles the GAAP performance measures to the corresponding non-GAAP measures, which provides a basis for period-to-period comparisons.

(d) Represents period-end consolidated total loans and loans held for sale divided by period-end consolidated total deposits.

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Figure 36. Selected Quarterly GAAP to Non-GAAP Reconciliations

dollars in millions	2019 Quarters Fourth	Third	Second	First	2018 Quarters Fourth	Third	Second	First
Tangible common equity to tangible assets at period end								
Key shareholders' equity (GAAP)	**$ 17,038**	**$ 17,116**	**$ 16,969**	**$ 15,924**	$ 15,595	$ 15,208	$ 15,100	$ 14,944
Less: Intangible assets [(a)]	**2,910**	**2,928**	**2,952**	**2,804**	2,818	2,838	2,858	2,902
Preferred Stock [(b)]	**1,856**	**1,856**	**1,856**	**1,421**	1,421	1,421	1,009	1,009
Tangible common equity (non-GAAP)	**$ 12,272**	**$ 12,332**	**$ 12,161**	**$ 11,699**	$ 11,356	$ 10,949	$ 11,233	$ 11,033
Total assets (GAAP)	**$ 144,988**	**$ 146,691**	**$ 144,545**	**$ 141,515**	$ 139,613	$ 138,805	$ 137,792	$ 137,049
Less: Intangible assets [(a)]	**2,910**	**2,928**	**2,952**	**2,804**	2,818	2,838	2,858	2,902
Tangible assets (non-GAAP)	**$ 142,078**	**$ 143,763**	**$ 141,593**	**$ 138,711**	$ 136,795	$ 135,967	$ 134,934	$ 134,147
Tangible common equity to tangible assets ratio (non-GAAP)	**8.64%**	**8.58%**	**8.59%**	**8.43%**	8.30%	8.05%	8.32%	8.22%
Average tangible common equity								
Average Key shareholders' equity (GAAP)	**$ 17,178**	**$ 17,113**	**$ 16,531**	**$ 15,702**	$ 15,384	$ 15,210	$ 15,032	$ 14,889
Less: Intangible assets (average) [(c)]	**2,919**	**2,942**	**2,959**	**2,813**	2,828	2,848	2,883	2,916
Preferred Stock (average)	**1,900**	**1,900**	**1,762**	**1,450**	1,450	1,316	1,025	1,025
Average tangible common equity (non-GAAP)	**$ 12,359**	**$ 12,271**	**$ 11,810**	**$ 11,439**	$ 11,106	$ 11,046	$ 11,124	$ 10,948
Return on average tangible common equity from continuing operations								
Net income (loss) from continuing operations attributable to Key common shareholders (GAAP)	**$ 439**	**$ 383**	**$ 403**	**$ 386**	$ 459	$ 468	$ 464	$ 402
Average tangible common equity (non-GAAP)	**12,359**	**12,271**	**11,810**	**11,439**	11,106	11,046	11,124	10,948
Return on average tangible common equity from continuing operations (non-GAAP)	**14.09%**	**12.38%**	**13.69%**	**13.69%**	16.40%	16.81%	16.73%	14.89%
Return on average tangible common equity consolidated								
Net income (loss) attributable to Key common shareholders (GAAP)	**$ 442**	**$ 386**	**$ 405**	**$ 387**	$ 461	$ 468	$ 467	$ 404
Average tangible common equity (non-GAAP)	**12,359**	**12,271**	**11,810**	**11,439**	11,106	11,046	11,124	10,948
Return on average tangible common equity consolidated (non-GAAP)	**14.19%**	**14.19%**	**14.19%**	**14.19%**	14.19%	14.19%	14.19%	14.97%
Cash efficiency ratio								
Noninterest expense (GAAP)	**$ 980**	**$ 939**	**$ 1,019**	**$ 963**	$ 1,012	$ 964	$ 993	$ 1,006
Less: Intangible asset amortization (GAAP)	**19**	**26**	**22**	**22**	22	23	25	29
Adjusted noninterest expense (non-GAAP)	**$ 961**	**$ 913**	**$ 997**	**$ 941**	$ 990	$ 941	$ 968	$ 977
Net interest income (GAAP)	**$ 979**	**$ 972**	**$ 981**	**$ 977**	$ 1,000	$ 986	$ 979	$ 944
Plus: TE adjustment	**8**	**8**	**8**	**8**	8	7	8	8
Noninterest income (GAAP)	**651**	**650**	**622**	**536**	645	609	660	601
Total TE revenue (non-GAAP)	**$ 1,638**	**$ 1,630**	**$ 1,611**	**$ 1,521**	$ 1,653	$ 1,602	$ 1,647	$ 1,553
Cash efficiency ratio (non-GAAP)	**58.7%**	**56.0%**	**61.9%**	**61.9%**	59.9%	58.7%	58.8%	62.9%

(a) For the three months ended December 31, 2019, September 30, 2019, June 30, 2019, and March 31, 2019, intangible assets exclude $7 million, $9 million, $10 million, and $12 million, respectively, of period-end purchased credit card relationships. For the three months ended December 31, 2018, September 30, 2018, June 30, 2018, and March 31, 2018, intangible assets exclude $14 million, $17 million, $20 million, and $23 million, respectively, of period-end purchased credit card relationships.

(b) Net of capital surplus.

(c) For the three months ended December 31, 2019, September 30, 2019, June 30, 2019, and March 31, 2019, average intangible assets exclude $8 million, $9 million, $11 million, and $13 million, respectively, of average purchased credit card relationships. For the three months ended December 31, 2018, September 30, 2018, June 30, 2018, and March 31, 2018, average intangible assets exclude $15 million, $18 million, $21 million, and $24 million, respectively, of average purchased credit card relationships.

Critical Accounting Policies and Estimates

Our business is dynamic and complex. Consequently, we must exercise judgment in choosing and applying accounting policies and methodologies. These choices are critical; not only are they necessary to comply with GAAP, they also reflect our view of the appropriate way to record and report our overall financial performance. All accounting policies are important, and all policies described in Note 1 ("Summary of Significant Accounting Policies") should be reviewed for a greater understanding of how we record and report our financial performance.

In our opinion, some accounting policies are more likely than others to have a critical effect on our financial results and to expose those results to potentially greater volatility. These policies apply to areas of relatively greater business importance, or require us to exercise judgment and to make assumptions and estimates that affect amounts reported in the financial statements. Because these assumptions and estimates are based on current circumstances, they may prove to be inaccurate, or we may find it necessary to change them. The following is a description of our current critical accounting policies.

Allowance for loan and lease losses

The ALLL is calculated with the objective of maintaining a reserve sufficient to absorb estimated probable losses incurred in the loan portfolio. In determining the ALLL, we apply expected loss rates to existing loans with similar risk characteristics and exercise judgment to assess the impact of factors such as changes in economic conditions, underwriting standards, concentrations of credit, collateral values, and the amounts and timing of expected future cash flows. For all commercial and consumer TDRs, regardless of size, as well as all other impaired commercial loans with outstanding balances of $2.5 million or greater, we conduct further analysis to determine the probable loss and assign a specific allowance to the loan.

Our loss estimates include an assessment of internal and external influences on credit quality that may not be fully reflective of the historical loss, risk-rating, or other indicative data. The ALLL is sensitive to a variety of internal factors, such as modifications in the mix and level of loan balances outstanding, portfolio performance and assigned risk ratings. The ALLL is also sensitive to a variety of external factors, such as the general health of the economy, as evidenced by volatility in commodity prices, changes in real estate demand and values, interest rates, unemployment rates, bankruptcy filings, fluctuations in the GDP, and the effects of weather and natural disasters such as droughts, floods and hurricanes. Management considers these variables and all other available information when establishing the final level of the ALLL. These variables and others may result in actual loan losses that differ from the originally estimated amounts.

Since our loss rates are applied to large pools of loans, even minor changes in the level of estimated losses can significantly affect management's determination of the appropriate ALLL because those changes must be applied across a large portfolio. To illustrate, an increase in estimated losses equal to one-tenth of one percent of our consumer loan portfolio as of December 31, 2019, would indicate the need for a $27 million increase in the ALLL. The same increase in estimated losses for the commercial loan portfolio would result in a $68 million increase in the ALLL. Such adjustments to the ALLL can materially affect financial results. Following the above examples, a $27 million increase in the consumer loan portfolio allowance would have reduced our earnings on an after-tax basis by approximately $20 million, or $.02 per Common Share; a $68 million increase in the commercial loan portfolio allowance would have reduced earnings on an after-tax basis by approximately $52 million, or $.05 per Common Share.

Our accounting policy related to the ALLL is disclosed in Note 1 under the heading "Allowance for Loan and Lease Losses." As described in Note 1, ("Summary of Significant Accounting Policies"), on January 1, 2020, we adopted ASC 326, *Financial Instruments — Credit Losses,* and as such, an expected credit loss methodology, specifically current expected credit losses for the remaining life of our loans and leases, will be used to estimate the appropriate level of the ALLL.

Valuation methodologies

<u>Fair value measurements</u>

We measure or monitor many of our assets and liabilities on a fair value basis. Fair value is generally defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) as opposed to the price that would be paid to acquire the asset or received to assume the liability (an entry price), in an orderly transaction between market participants at the measurement date under current market conditions. While management uses judgment when determining the price at which willing market participants would transact when there has been a significant decrease in the volume or level of activity for the asset or liability in relation to "normal" market activity, management's objective is to determine the point within the range of fair value estimates that is most representative of a sale to a third-party investor under current market conditions. The value to us if the asset or liability were held to maturity is not included in the fair value estimates.

A fair value measure should reflect the assumptions that market participants would use in pricing the asset or liability, including the assumptions about the risk inherent in a particular valuation technique, the effect of a restriction on the sale or use of an asset and the risk of nonperformance. Fair value is measured based on a variety of inputs. Fair value may be based on quoted market prices for identical assets or liabilities traded in active markets (Level 1 valuations). If market prices are not available, quoted market prices for similar instruments traded in active markets, quoted prices for identical or similar instruments in markets that are not active, or model-based valuation techniques for which all significant assumptions are observable in the market are used (Level 2 valuations). Where observable market data is not available, the valuation is generated from model based techniques that use significant assumptions not observable in the market, but observable based on our specific data (Level 3 valuations). Unobservable assumptions reflect our estimates for assumptions that market participants would use in pricing the asset or liability. Valuation techniques typically include option pricing models, discounted cash flow models and similar techniques, but may also include the use of market prices of assets or liabilities that are not directly comparable to the subject asset or liability.

The selection and weighting of the various fair value techniques may result in a fair value higher or lower than carrying value. Considerable judgment may be involved in determining the amount that is most representative of fair value.

For assets and liabilities recorded at fair value, our policy is to maximize the use of observable inputs and minimize the use of unobservable inputs when developing fair value measurements for those items where there is an active market. In certain cases, when market observable inputs for model-based valuation techniques may not be readily available, we are required to make judgments about assumptions market participants would use in estimating the fair value of the financial instrument. The models used to determine fair value adjustments are regularly evaluated by management for relevance under current facts and circumstances.

Changes in market conditions may reduce the availability of quoted prices or observable data. For example, reduced liquidity in the capital markets or changes in secondary market activities could result in observable market inputs becoming unavailable. When market data is not available, we use valuation techniques requiring more management judgment to estimate the appropriate fair value.

Fair value is used on a recurring basis for certain assets and liabilities in which fair value is the primary measure of accounting. Fair value is used on a nonrecurring basis to measure certain assets or liabilities (including held-to-maturity securities, commercial loans held for sale, and OREO) for impairment or for disclosure purposes in accordance with current accounting guidance.

Impairment analysis also relates to long-lived assets, goodwill, and core deposit and other intangible assets. An impairment loss is recognized if the carrying amount of the asset is not likely to be recoverable and exceeds its fair value. In determining the fair value, management uses models and applies the techniques and assumptions previously discussed.

See Note 1 under the heading “Fair Value Measurements” and Note 6 (“Fair Value Measurements”) for a detailed discussion of determining fair value, including pricing validation processes.

Goodwill

The valuation and testing methodologies used in our analysis of goodwill impairment are summarized in Note 1 under the heading “Goodwill and Other Intangible Assets.” Although accounting guidance permits an entity to first assess qualitative factors to determine whether additional goodwill impairment testing is required, Key chose to utilize the quantitative approach in 2019.

The quantitative approach is a two step goodwill impairment test. The first step in goodwill impairment testing is to determine the fair value of each reporting unit. The amount of capital being allocated to our reporting units as a proxy for the carrying value is based on risk-based regulatory capital requirements. Fair values are estimated using an equal combination of market and income approaches. The market approach incorporates comparable public company multiples along with data related to recent merger and acquisition activity. The income approach consists of discounted cash flow modeling that utilizes internal forecasts and various other inputs and assumptions. A multi-year internal forecast is prepared for each reporting unit and a terminal growth rate is estimated for each one based on market expectations of inflation and economic conditions in the financial services industry. Earnings projections for each reporting unit are adjusted for after tax cost savings expected to be realized by a market participant. The discount rate applied to our cash flows is derived from the CAPM. The buildup to the discount rate includes a risk-free rate, 5-year adjusted beta based on peer companies, a market equity risk premium, a size premium and a company specific risk premium. The discount rates differ between our reporting units as they have varying levels of risk. A sensitivity analysis is typically performed on key assumptions, such as the discount rates and cost savings estimates.

If the fair value determined in step 1 is greater than the carrying value, then the reporting unit's goodwill is deemed not to be impaired. If the fair value is less than the carrying value, then the second step is performed, which measures the amount of impairment by comparing the carrying amount of goodwill to its implied fair value. The second step of the goodwill impairment test was not required in 2019. Effective January 1, 2020, upon the adoption of ASU 2017-04, the second step of the goodwill impairment test was eliminated.

We continue to monitor the impairment indicators for goodwill and other intangible assets, and to evaluate the carrying amount of these assets quarterly. Additional information is provided in Note 12 (“Goodwill and Other Intangible Assets”).

Derivatives and hedging

We primarily use interest rate swaps to hedge interest rate risk for asset and liability management purposes. These derivative instruments modify the interest rate characteristics of specified on-balance sheet assets and liabilities. Our accounting policies related to derivatives reflect the current accounting guidance, which provides that all derivatives should be recognized as either assets or liabilities on the balance sheet at fair value, after taking into account the effects of master netting agreements. Accounting for changes in the fair value (i.e., gains or losses) of a particular derivative depends on whether the derivative has been designated and qualifies as part of a hedging relationship, and further, on the type of hedging relationship.

The application of hedge accounting requires significant judgment to interpret the relevant accounting guidance, as well as to assess hedge effectiveness, identify similar hedged item groupings, and measure changes in the fair value of the hedged items. We believe our methods of addressing these judgments and applying the accounting guidance are consistent with both the guidance and industry practices. Additional information relating to our use of derivatives is included in Note 1 under the heading “Derivatives and Hedging,” and Note 8 (“Derivatives and Hedging Activities”).

Contingent liabilities, guarantees and income taxes

Note 22 (“Commitments, Contingent Liabilities, and Guarantees”) summarizes contingent liabilities arising from litigation and contingent liabilities arising from guarantees in various agreements with third parties under which we are a guarantor, and the potential effects of these items on the results of our operations. We record a liability for the fair value of the obligation to stand ready to perform over the term of a guarantee, but there is a risk that our actual future payments in the event of a default by the guaranteed party could exceed the recorded amount. See Note 22 (“Commitments, Contingent Liabilities, and Guarantees”) for a comparison of the liability recorded and the maximum potential undiscounted future payments for the various types of guarantees that we had outstanding at December 31, 2019.

It is not always clear how the Internal Revenue Code and various state tax laws apply to transactions that we undertake. In the normal course of business, we may record tax benefits and then have those benefits contested by the IRS or state tax authorities. We have provided tax reserves that we believe are adequate to absorb potential adjustments that such challenges may necessitate. However, if our judgment later proves to be inaccurate, the tax reserves may need to be adjusted, which could have an adverse effect on our results of operations and capital.

Additionally, we conduct quarterly assessments that determine the amount of deferred tax assets that are more-likely-than-not to be realized, and therefore recorded. The available evidence used in connection with these assessments includes a history of pretax income, projected future taxable income, potential tax-planning strategies, and projected future reversals of deferred tax liabilities. These assessments are subjective and may change. Based on these criteria, and all available positive and negative evidence, we establish a valuation allowance for deferred tax assets when we are unable to conclude it is more likely than not that they will be realized. However, if our assessments prove incorrect, they could have a material adverse effect on our results of operations in the period in which they occur. For further information on our accounting for income taxes, see Note 1 (“Summary of Significant Accounting Policies”) and Note 14 (“Income Taxes”).

During 2019, we did not significantly alter the manner in which we applied our critical accounting policies or developed related assumptions and estimates.

Accounting and reporting developments

Accounting guidance pending adoption at December 31, 2019

Standard	Required Adoption	Description	Effect on Financial Statements or Other Significant Matters
ASU 2019-12, *Simplifying the Accounting for Income Taxes*	January 1, 2021 Early adoption is permitted	This ASU simplifies the accounting for income taxes by removing certain exceptions to the existing guidance, such as exceptions related to the incremental approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated loss and the recognition of deferred tax liabilities when a foreign subsidiary becomes an equity method investment and when a foreign equity method investment becomes a subsidiary. Along with general improvements, it adds simplifications related to franchise taxes, the tax basis of goodwill and the method for recognizing an enacted change in tax laws. The guidance also specifies that an entity is not required to allocate the consolidated amount of certain tax expense to a legal entity not subject to tax in its own separate financial statements. The guidance should be applied on either a retrospective, modified retrospective or prospective basis depending on the amendment.	The adoption of this accounting guidance is not expected to have a material effect on our financial condition or results of operations.
ASU 2020-01, *Clarifying the Interactions between Topic 321,Investments— Equity Securities; Topic 323, Investments— Equity Method and Joint Ventures; and Topic 815, Derivatives and Hedging*	January 1, 2021 Early adoption is permitted	This guidance clarifies that when applying the measurement alternative in Topic 321, companies should consider certain observable transactions that require the application or discontinuance of the equity method under Topic 323. It also clarifies that companies should not consider whether the underlying securities in certain forward contracts and purchased options would be accounted for under the equity method or fair value option when determining the method of accounting for those contracts. This guidance should be applied on a prospective basis.	The adoption of this accounting guidance is not expected to have a material effect on our financial condition or results of operations.

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European Sovereign and Non-Sovereign Debt Exposures

Our total European sovereign and non-sovereign debt exposure is presented in Figure 37.

Figure 37. European Sovereign and Non-Sovereign Debt Exposures

December 31, 2019 *in millions*	**Short- and Long-Term Commercial Total** [(a)]	**Foreign Exchange and Derivatives with Collateral** [(b)]	**Net Exposure**
France:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	—	—
Non-sovereign non-financial institutions	$ 2	—	$ 2
Total	2	—	2
Germany:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	—	—
Non-sovereign non-financial institutions	38	—	38
Total	38	—	38
Italy:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	—	—
Non-sovereign non-financial institutions	4	—	4
Total	4	—	4
Luxembourg:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	—	—
Non-sovereign non-financial institutions	8	—	8
Total	8	—	8
Switzerland:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	—	—
Non-sovereign non-financial institutions	—	—	—
Total	—	—	—
United Kingdom:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	$ 282	282
Non-sovereign non-financial institutions	1	—	1
Total	1	282	283
Total Europe:			
Sovereigns	—	—	—
Non-sovereign financial institutions	—	282	282
Non-sovereign non-financial institutions	53	—	53
Total	$ 53	$ 282	$ 335

(a) Represents our outstanding leases.
(b) Represents contracts to hedge our balance sheet asset and liability needs, and to accommodate our clients' trading and/or hedging needs. Our derivative mark-to-market exposures are calculated and reported on a daily basis. These exposures are largely covered by cash or highly marketable securities collateral with daily collateral calls.

Our credit risk exposure is largely concentrated in developed countries with emerging market exposure essentially limited to commercial facilities; these exposures are actively monitored by management. We do not have at-risk exposures in the rest of the world.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information included under the caption "Risk Management — Market risk management" in the MD&A beginning on page 66 is incorporated herein by reference.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our financial performance for each of the past eight quarters is summarized in Figure 35 contained in the "Fourth Quarter Results" section in the MD&A.

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Management's Annual Report on Internal Control over Financial Reporting

We are responsible for the preparation, content and integrity of the financial statements and other statistical data and analyses compiled for this annual report. The financial statements and related notes have been prepared in conformity with U.S. generally accepted accounting principles and include amounts which of necessity are based on management's best estimates and judgments and give due consideration to materiality. We believe the financial statements and notes present fairly our financial position, results of operations and cash flows in all material respects.

We are responsible for establishing and maintaining a system of internal control that is designed to protect our assets and the integrity of our financial reporting as defined in the Securities Exchange Act of 1934, as amended. This corporate-wide system of controls includes policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Corporation; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of the consolidated financial statements in conformity with U.S. generally accepted accounting principles, and that receipts and expenditures of the Corporation are made only in accordance with authorizations of management and directors of the Corporation; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Corporation's assets that could have a material effect on the consolidated financial statements. All employees are required to comply with our code of ethics. We conduct an annual certification process to ensure that our employees meet this obligation. Although any system of internal control can be compromised by human error or intentional circumvention of required procedures, we believe our system provides reasonable assurance that financial transactions are recorded and reported properly, providing an adequate basis for reliable financial statements.

During 2019, the Audit Committee of the Board of Directors met regularly with Management, internal audit, and the independent registered public accounting firm, Ernst & Young LLP, to review the scope of their audits and to discuss the evaluation of internal accounting controls and financial reporting matters. The independent registered public accounting firm and the internal auditors have free access to, and meet confidentially with, the audit committee to discuss appropriate matters. Also, the Corporation maintains a Disclosure Review Committee. This committee's purpose is to design and maintain disclosure controls and procedures to ensure that material information relating to the financial and operating condition of the Corporation is properly reported to its Chief Executive Officer, Chief Financial Officer, General Auditor, and the Audit Committee of the Board of Directors in connection with the preparation and filing of periodic reports and the certification of those reports by the Chief Executive Officer and the Chief Financial Officer.

Management's Assessment of Internal Control over Financial Reporting

Management assessed, with participation of the Corporation's Chief Executive Officer and Chief Financial Officer, the effectiveness of our internal control and procedures over financial reporting using criteria described in "Internal Control - Integrated Framework," issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on that assessment, we believe we maintained an effective system of internal control over financial reporting as of December 31, 2019.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Corporation's internal control over financial reporting as of December 31, 2019 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their accompanying report dated February 26, 2020.

Beth E. Mooney

Beth E. Mooney
Chairman and Chief Executive Officer

Donald R. Kimble
Chief Financial Officer

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm on Internal Control over Financial Reporting

Opinion on Internal Control over Financial Reporting

We have audited KeyCorp's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, KeyCorp maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of KeyCorp as of December 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes of KeyCorp and our report dated February 26, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

KeyCorp's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying financial statements. Our responsibility is to express an opinion on KeyCorp's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to KeyCorp in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) 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. Also, 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.

Ernst + Young LLP

Cleveland, Ohio
February 26, 2020

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of KeyCorp

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of KeyCorp (the Company) as of December 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 26, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

Allowance for Loan and Lease Losses

Description of the matter	The Company's loan and lease portfolio totaled $94.6 billion as of December 31, 2019 and the associated allowance for loan and lease losses (ALLL) was $900 million. As discussed in Note 1 and 5 of the financial statements, the ALLL represents management's estimate of incurred credit losses inherent in the loan portfolio at the balance sheet date. Management estimates the ALLL by applying expected loss rates derived from a statistical analysis of historical default and loss severity experience to existing loans with similar characteristics. The ALLL also considers adjustments to reflect management's assessment of qualitative factors that may not be measured in the statistical analysis of expected losses, including external factors, along with Company and portfolio specific factors. Auditing management's ALLL is complex and involves a high degree of subjectivity due to the judgment required in evaluating management's determination of the qualitative external, Company and portfolio specific factor adjustments to the ALLL described above.
How we addressed the matter in our audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's ALLL process, including controls over the appropriateness of the ALLL methodology, the reliability and accuracy of data used to support qualitative factor adjustments to the ALLL, and management's review and approval process over qualitative factor adjustments to the ALLL. To test the qualitative factor adjustments, our audit procedures included, among others, assessing management's methodology and considering whether relevant risks were reflected in the modeled provision and whether adjustments to modeled calculations were appropriate. We tested the underlying data used to estimate the qualitative adjustments to determine whether it was accurate, complete and relevant. We evaluated whether qualitative adjustments were reasonable based on changes in the loan portfolio and changes in management's policies, procedures and lending personnel. For example, we evaluated concentrations of credit by testing the completeness and accuracy of underlying source data utilized by management and independently comparing concentrations to loan portfolio information. We also assessed whether qualitative adjustments were consistent with publicly available information (e.g. macroeconomic and peer bank data). Further, we performed an independent search for the existence of new or contrary information relating to risks impacting the qualitative factor adjustments to validate that management's considerations are appropriate.

Ernst & Young LLP

We have served as KeyCorp's auditor since 1994.

Cleveland, Ohio

February 26, 2020

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Consolidated Balance Sheets

December 31, *in millions, except per share data*	2019	2018
ASSETS		
Cash and due from banks	**$ 732**	$ 678
Short-term investments	**1,272**	2,562
Trading account assets	**1,040**	849
Securities available for sale	**21,843**	19,428
Held-to-maturity securities (fair value: $10,116 and $11,122)	**10,067**	11,519
Other investments	**605**	666
Loans, net of unearned income of $603 and $678	**94,646**	89,552
Allowance for loan and lease losses	**(900)**	(883)
Net loans	**93,746**	88,669
Loans held for sale [(a)]	**1,334**	1,227
Premises and equipment	**814**	882
Goodwill	**2,664**	2,516
Other intangible assets	**253**	316
Corporate-owned life insurance	**4,233**	4,171
Accrued income and other assets	**5,494**	5,030
Discontinued assets	**891**	1,100
Total assets	**$ 144,988**	$ 139,613
LIABILITIES		
Deposits in domestic offices:		
NOW and money market deposit accounts	**$ 66,714**	$ 59,918
Savings deposits	**4,651**	4,854
Certificates of deposit ($100,000 or more)	**6,598**	7,913
Other time deposits	**5,054**	5,332
Total interest-bearing deposits	**83,017**	78,017
Noninterest-bearing deposits	**28,853**	29,292
Total deposits	**111,870**	107,309
Federal funds purchased and securities sold under repurchase agreements	**387**	319
Bank notes and other short-term borrowings	**705**	544
Accrued expense and other liabilities	**2,540**	2,113
Long-term debt	**12,448**	13,732
Total liabilities	**127,950**	124,017
EQUITY		
Preferred stock	**1,900**	1,450
Common Shares, $1 par value; authorized 2,100,000,000 and 1,400,000,000 shares; issued 1,256,702,081 and 1,256,702,081 shares	**1,257**	1,257
Capital surplus	**6,295**	6,331
Retained earnings	**12,469**	11,556
Treasury stock, at cost (279,513,530 and 237,198,944 shares)	**(4,909)**	(4,181)
Accumulated other comprehensive income (loss)	**26**	(818)
Key shareholders' equity	**17,038**	15,595
Noncontrolling interests	**—**	1
Total equity	**17,038**	15,596
Total liabilities and equity	**$ 144,988**	$ 139,613

(a) Total loans held for sale include Real estate — residential mortgage loans held for sale at fair value of $140 million at December 31, 2019, and $54 million at December 31, 2018.
See notes to Consolidated Financial Statements

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Consolidated Statements of Income

Year ended December 31, *dollars in millions, except per share amounts*	**2019**	2018	2017
INTEREST INCOME			
Loans	**$ 4,267**	$ 4,023	$ 3,677
Loans held for sale	**63**	66	52
Securities available for sale	**537**	409	369
Held-to-maturity securities	**262**	284	222
Trading account assets	**32**	29	27
Short-term investments	**61**	46	26
Other investments	**13**	21	17
Total interest income	**5,235**	4,878	4,390
INTEREST EXPENSE			
Deposits	**853**	517	278
Federal funds purchased and securities sold under repurchase agreements	**2**	11	1
Bank notes and other short-term borrowings	**17**	21	15
Long-term debt	**454**	420	319
Total interest expense	**1,326**	969	613
NET INTEREST INCOME	**3,909**	3,909	3,777
Provision for credit losses	**445**	246	229
Net interest income after provision for credit losses	**3,464**	3,663	3,548
NONINTEREST INCOME			
Trust and investment services income	**475**	499	535
Investment banking and debt placement fees	**630**	650	603
Service charges on deposit accounts	**337**	349	357
Operating lease income and other leasing gains	**162**	89	96
Corporate services income	**236**	233	219
Cards and payments income	**275**	270	287
Corporate-owned life insurance income	**136**	137	131
Consumer mortgage income	**46**	30	26
Mortgage servicing fees	**94**	82	71
Other income [a]	**68**	176	153
Total noninterest income	**2,459**	2,515	2,478
NONINTEREST EXPENSE			
Personnel	**2,250**	2,309	2,278
Net occupancy	**293**	308	331
Computer processing	**214**	210	225
Business services and professional fees	**186**	184	192
Equipment	**100**	105	114
Operating lease expense	**123**	120	92
Marketing	**96**	102	120
FDIC assessment	**31**	72	82
Intangible asset amortization	**89**	99	95
OREO expense, net	**13**	6	11
Other expense	**506**	460	558
Total noninterest expense	**3,901**	3,975	4,098
INCOME (LOSS) FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	**2,022**	2,203	1,928
Income taxes	**314**	344	637
INCOME (LOSS) FROM CONTINUING OPERATIONS	**1,708**	1,859	1,291
Income (loss) from discontinued operations	**9**	7	7
NET INCOME (LOSS)	**1,717**	1,866	1,298
Less: Net income (loss) attributable to noncontrolling interests	**—**	—	2
NET INCOME (LOSS) ATTRIBUTABLE TO KEY	**$ 1,717**	$ 1,866	$ 1,296
Income (loss) from continuing operations attributable to Key common shareholders	**$ 1,611**	$ 1,793	$ 1,219
Net income (loss) attributable to Key common shareholders	**1,620**	1,800	1,226
Per Common Share:			
Income (loss) from continuing operations attributable to Key common shareholders	**$ 1.62**	$ 1.72	$ 1.13
Income (loss) from discontinued operations, net of taxes	**.01**	.01	.01
Net income (loss) attributable to Key common shareholders [b]	**1.63**	1.73	1.14
Per Common Share — assuming dilution:			
Income (loss) from continuing operations attributable to Key common shareholders	**$ 1.61**	$ 1.70	$ 1.12

Income (loss) from discontinued operations, net of taxes	**.01**	.01	.01
Net income (loss) attributable to Key common shareholders (b)	**1.62**	1.71	1.13
Cash dividends declared per Common Share	**$ .71**	$ .565	$ .38
Weighted-average Common Shares outstanding (000)	**992,091**	1,040,890	1,072,078
Effect of convertible preferred stock	**—**	—	—
Effect of Common Share options and other stock awards	**10,163**	13,792	16,515
Weighted-average Common Shares and potential Common Shares outstanding (000) (c)	**1,002,254**	1,054,682	1,088,593

(a) Net securities gains (losses) totaled $20 million for the year ended December 31, 2019, less than $1 million for the year ended December 31, 2018, and $1 million for the year ended December 31, 2017. For 2019, 2018, and 2017, we did not have any impairment losses related to securities.

(b) EPS may not foot due to rounding.

(c) Assumes conversion of Common Share options and other stock awards and/or convertible preferred stock, as applicable.

See Notes to Consolidated Financial Statements.

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Consolidated Statements of Comprehensive Income

Year ended December 31, *in millions*	2019	2018	2017
Net income (loss)	**$ 1,717**	$ 1,866	$ 1,298
Other comprehensive income (loss), net of tax:			
Net unrealized gains (losses) on securities available for sale, net of income taxes of $(151), ($19), and $13	**488**	(62)	(126)
Net unrealized gains (losses) on derivative financial instruments, net of income taxes of $(93), $11, and ($19)	**300**	36	(72)
Foreign currency translation adjustments, net of income taxes of $(4), $11, and $9	**14**	(23)	12
Net pension and postretirement benefit costs, net of income taxes of $(13), $3, and $80	**42**	10	(52)
Total other comprehensive income (loss), net of tax	**844**	(39)	(238)
Comprehensive income (loss)	**2,561**	1,827	1,060
Less: Comprehensive income attributable to noncontrolling interests	**—**	—	2
Comprehensive income (loss) attributable to Key	**$ 2,561**	$ 1,827	$ 1,058

See Notes to Consolidated Financial Statements.

Consolidated Statements of Changes in Equity

dollars in millions, except per share amounts	Key Shareholders' Equity: Preferred Shares Outstanding (000)	Key Shareholders' Equity: Common Shares Outstanding (000)	Key Shareholders' Equity: Preferred Stock	Key Shareholders' Equity: Common Shares	Key Shareholders' Equity: Capital Surplus	Key Shareholders' Equity: Retained Earnings	Key Shareholders' Equity: Treasury Stock, at Cost	Key Shareholders' Equity: Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests
BALANCE AT DECEMBER 31, 2016	17,421	1,079,314	$ 1,665	$ 1,257	$ 6,385	$ 9,378	$ (2,904)	$ (541)	—
Net income (loss)						1,296			$ 2
Other comprehensive income (loss)								(238)	
Reclassification of tax effects in AOCI resulting from the new federal corporate income tax rate						141			
Deferred compensation					16				
Cash dividends declared									
Common shares ($.38 per share)						(410)			
Series A Preferred Stock ($1.9375 per share)						(6)			
Series C Preferred Stock ($.539063 per share)						(7)			
Series D Preferred Stock ($50.00 per depositary share)						(26)			
Series E Preferred Stock ($1.544012 per depositary share)						(31)			
Open market Common Share repurchases		(36,140)					(665)		
Employee equity compensation program Common Share repurchases		(3,520)					(65)		
Series A Preferred Stock exchanged for Common Shares	(2,900)	20,568	(290)		(49)		338		
Redemption of Series C Preferred Stock	(14,000)		(350)						
Common Shares reissued (returned) for stock options and other employee benefit plans		8,862			(17)		146		
Net contribution from (distribution to) noncontrolling interests									—
BALANCE AT DECEMBER 31, 2017	521	1,069,084	1,025	1,257	6,335	10,335	(3,150)	(779)	2
Cumulative effect from changes in accounting principle [(a)]						(2)			
Other reclassification of AOCI						13			
Net income (loss)						1,866			—
Other comprehensive income (loss)								(39)	
Deferred compensation					21				
Cash dividends declared									
Common Shares ($.565 per share)						(590)			
Series D Preferred Stock ($50.00 per depositary share)						(26)			
Series E Preferred Stock ($1.531252 per depositary share)						(31)			
Series F Preferred Stock ($.529688 per depositary share)						(9)			
Issuance of Series F Preferred Stock	425		425		(13)				
Open market Common Share repurchases		(54,006)					(1,098)		
Employee equity compensation program Common Share repurchases		(2,286)					(47)		
Common Shares reissued (returned) for stock options and other employee benefit plans		6,711			(12)		114		
Net contribution from (distribution to) noncontrolling interests									(1)
BALANCE AT DECEMBER 31, 2018	946	1,019,503	1,450	1,257	6,331	11,556	(4,181)	(818)	1
Net income (loss)						**1,717**			**—**
Other comprehensive income (loss)								**844**	
Deferred compensation					**9**				
Cash dividends declared									
Common Shares ($.71 per share)						**(707)**			
Series D Preferred Stock ($50.00 per depositary share)						**(26)**			
Series E Preferred Stock ($1.531252 per depositary share)						**(31)**			
Series F Preferred Stock ($1.4125 per depositary share)						**(24)**			
Series G Preferred Stock ($.882813 per depositary share)						**(16)**			
Issuance of Series G Preferred Stock	**450**		**450**		**(15)**				
Open market Common Share repurchases		**(48,347)**					**(835)**		
Employee equity compensation program Common Share repurchases		**(1,901)**			**(2)**		**(33)**		
Common Shares reissued (returned) for stock options and other employee benefit plans		**7,934**			**(28)**		**140**		

Net contribution from (distribution to) noncontrolling interests									(1)
BALANCE AT DECEMBER 31, 2019	**1,396**	**977,189**	**$ 1,900**	**$ 1,257**	**$ 6,295**	**$ 12,469**	**$ (4,909)**	**$ 26**	**—**

(a) Includes the impact of implementing ASU 2014-09, ASU 2016-01, and ASU 2017-12
See Notes to Consolidated Financial Statements.

Consolidated Statements of Cash Flows

Year ended December 31, *in millions*	2019	2018	2017
OPERATING ACTIVITIES			
Net income (loss)	$ 1,717	$ 1,866	$ 1,298
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Provision for credit losses	445	246	229
Depreciation and amortization expense, net	241	382	407
Accretion of acquired loans	50	86	203
Increase in cash surrender value of corporate-owned life insurance	(121)	(117)	(119)
Stock-based compensation expense	96	99	100
FDIC reimbursement (payments), net of FDIC expense	—	(10)	(3)
Deferred income taxes (benefit)	53	98	303
Proceeds from sales of loans held for sale	11,980	14,019	11,963
Originations of loans held for sale, net of repayments	(11,704)	(13,948)	(11,846)
Net losses (gains) from sale of loans held for sale	(188)	(183)	(181)
Net losses (gains) and writedown on OREO	7	—	5
Net losses (gains) on leased equipment	(17)	41	3
Net losses (gains) on sales of fixed assets	(2)	9	24
Net securities losses (gains)	(20)	—	(1)
Net decrease (increase) in trading account assets	(191)	(13)	31
Gain on sale of KIBS	—	(83)	—
Other operating activities, net	560	14	(601)
NET CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES	2,906	2,506	1,815
INVESTING ACTIVITIES			
Cash received (used) in acquisitions, net of cash acquired	(185)	—	(144)
Proceeds from sale of KIBS	—	124	—
Net decrease (increase) in short-term investments, excluding acquisitions	1,290	1,885	(1,672)
Purchases of securities available for sale	(5,714)	(4,594)	(3,002)
Proceeds from sales of securities available for sale	362	—	915
Proceeds from prepayments and maturities of securities available for sale	3,586	3,197	3,999
Proceeds from prepayments and maturities of held-to-maturity securities	1,477	1,558	1,797
Purchases of held-to-maturity securities	(22)	(1,242)	(3,398)
Purchases of other investments	(52)	(28)	(87)
Proceeds from sales of other investments	60	62	117
Proceeds from prepayments and maturities of other investments	56	40	4
Net decrease (increase) in loans, excluding acquisitions, sales, and transfers	(6,190)	(3,700)	(945)
Proceeds from sales of portfolio loans	399	204	183
Proceeds from corporate-owned life insurance	59	78	55
Purchases of premises, equipment, and software	(85)	(99)	(112)
Proceeds from sales of premises and equipment	18	2	—
Proceeds from sales of OREO	23	31	51
NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES	(4,918)	(2,482)	(2,239)
FINANCING ACTIVITIES			
Net increase (decrease) in deposits, excluding acquisitions	4,561	2,074	1,148
Net increase (decrease) in short-term borrowings	229	(148)	(1,299)
Net proceeds from issuance of long-term debt	2,129	2,306	2,852
Payments on long-term debt	(3,634)	(2,880)	(748)
Issuance of preferred shares	435	412	—
Repurchase of Common Shares	(835)	(1,098)	(664)
Employee equity compensation program Common Share repurchases	(33)	(47)	(66)
Redemption of Preferred Stock Series C	—	—	(350)
Net proceeds from reissuance of Common Shares	18	20	25
Cash dividends paid	(804)	(656)	(480)
NET CASH PROVIDED BY (USED IN) FINANCING ACTIVITIES	2,066	(17)	418
NET INCREASE (DECREASE) IN CASH AND DUE FROM BANKS	54	7	(6)
CASH AND DUE FROM BANKS AT BEGINNING OF YEAR	678	671	677
CASH AND DUE FROM BANKS AT END OF YEAR	$ 732	$ 678	$ 671
Additional disclosures relative to cash flows:			
Interest paid	$ 1,251	$ 892	$ 598
Income taxes paid (refunded)	18	12	6

Noncash items:			
Reduction of secured borrowing and related collateral	**$ 5**	20	$ 40
Loans transferred to portfolio from held for sale	**157**	24	105
Loans transferred to held for sale from portfolio	**468**	(33)	42
Loans transferred to other real estate owned	**29**	25	37
CMBS risk retentions	**59**	16	18
ABS risk retentions	**12**	—	—

See Notes to Consolidated Financial Statements.

1. Summary of Significant Accounting Policies

Organization

We are one of the nation's largest bank-based financial services companies, providing deposit, lending, cash management, and investment services to individuals and small and medium-sized businesses through our subsidiary, KeyBank. We also provide a broad range of sophisticated corporate and investment banking products, such as merger and acquisition advice, public and private debt and equity, syndications, and derivatives to middle market companies in selected industries throughout the United States through our subsidiary, KBCM. As of December 31, 2019, KeyBank operated 1,098 full-service retail banking branches and 1,420 ATMs in 15 states, as well as additional offices, online and mobile banking capabilities, and a telephone banking call center. Additional information pertaining to our two major business segments, Consumer Bank and Commercial Bank, is included in Note 25 ("Business Segment Reporting").

Use of Estimates

Our accounting policies conform to GAAP and prevailing practices within the financial services industry. We must make certain estimates and judgments when determining the amounts presented in our consolidated financial statements and the related notes. If these estimates prove to be inaccurate, actual results could differ from those reported.

Principles of Consolidation and Basis of Presentation

The consolidated financial statements include the accounts of KeyCorp and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. Some previously reported amounts have been reclassified to conform to current reporting practices.

The consolidated financial statements also include the accounts of any voting rights entities in which we have a controlling financial interest and certain VIEs. In accordance with the applicable accounting guidance for consolidations, we consolidate a VIE if we have the power to direct activities of the VIE that most significantly impact the entity's economic performance and the obligation to absorb losses of the entity or the right to receive benefits from the entity that could potentially be significant to the VIE. See Note 13 ("Variable Interest Entities") for information on our involvement with VIEs.

We use the equity method to account for unconsolidated investments in voting rights entities or VIEs if we have significant influence over the entity's operating and financing decisions (usually defined as a voting or economic interest of 20% to 50%, but not controlling). Unconsolidated investments in voting rights entities or VIEs in which we have a voting or economic interest of less than 20% generally are carried at fair value or a cost measurement alternative.

We have considered the impact of subsequent events on these consolidated financial statements.

Cash and Cash Equivalents

Cash and due from banks are considered "cash and cash equivalents" for financial reporting purposes. We do not consider cash on deposit with the Federal Reserve to be restricted.

Loans

Loans held in portfolio, which management has the intent and ability to hold for the foreseeable future or until maturity or payoff, are carried at the principal amount outstanding, net of unearned income, including net deferred loan fees and costs and unamortized premiums and discounts. We defer certain nonrefundable loan origination and commitment fees, and the direct costs of originating or acquiring loans. The net deferred amount is amortized over the estimated lives of the related loans as an adjustment to the yield.

Sales-type leases are carried at the aggregate of the lease receivable, estimated unguaranteed residual values, and deferred initial direct fees and costs if certain criteria are met. Direct financing leases are carried at the aggregate of the lease receivable, estimated unguaranteed residual values, and deferred initial direct fees and costs, less unearned income. Unearned income on direct financing leases is amortized over the lease terms using a method approximating the interest method that produces a constant rate of return. Deferred initial direct fees and costs for both sales-type and direct financing leases are amortized over the lease terms as an adjustment to the yield.

The residual value component of a lease represents the fair value of the leased asset at the end of the lease term. Residual values are reviewed at least annually to determine if an other-than-temporary decline in value has occurred. In the event of such a decline, the residual value is adjusted to its fair value. Impairment charges are included in the "provision for credit losses" and net gains or losses on sales of lease residuals are included in "other income" on the income statement. Additional information pertaining to the value of lease residuals is provided in Note 10 ("Leases").

Loans Held for Sale

Loans held for sale generally include certain residential and commercial mortgage loans, other commercial loans, and student loans. Loans are initially classified as held for sale when they are individually identified as being available for immediate sale and a formal plan exists to sell them. Loans held for sale are recorded at either fair value, if elected, or the lower of cost or fair value. Fair value is determined based on available market data for similar assets. When a loan is originated as held-for-sale, origination fees and costs are deferred but not amortized. Upon sale of the loans, deferred origination fees and costs are recognized as part of the calculated gain or loss on sale. Our commercial loans (including commercial mortgage and non-mortgage loans) and student loans, which we originated and intend to sell, are carried at the lower of aggregate cost or fair value. Subsequent declines in fair value for loans held for sale are recognized as a charge to "other income" on the income statement. Consumer real estate - residential mortgages loans have been elected to be carried at fair value. Subsequent increases and decreases in fair value for loans elected to be measured at fair value are recorded to "consumer mortgage income" on the income statement. Additional information regarding fair value measurements associated with our loans held for sale is provided in Note 6 ("Fair Value Measurements").

We may transfer certain loans to held for sale at the lower of cost or fair value. If a loan is transferred from the loan portfolio to the held-for-sale category, any write-down in the carrying amount of the loan at the date of transfer is recorded as a reduction in the ALLL. When a loan is transferred into the held for sale category, we stop amortizing the related deferred fees and costs. The remaining unamortized fees and costs are recognized as part of the cost basis of the loan at the time it is sold. We may also transfer loans from held for sale to the loan portfolio held for investment. If a loan held for sale for which fair value accounting was elected is transferred to held for investment, it will continue to be accounted for at fair value in the loan portfolio.

Nonperforming Loans

Nonperforming loans are loans for which we do not accrue interest income, and include commercial and consumer loans and leases as well as current year TDRs and nonaccruing TDR loans from prior years. Nonperforming loans do not include loans held for sale or PCI loans.

We generally classify commercial loans as nonperforming and stop accruing interest (i.e., designate the loan "nonaccrual") when the borrower's principal or interest payment is 90 days past due unless the loan is well-secured and in the process of collection. Commercial loans are also placed on nonaccrual status when payment is not past due but we have serious doubts about the borrower's ability to comply with existing repayment terms. Once a loan is designated nonaccrual (and as a result assessed for impairment), the interest accrued but not collected is generally charged against the ALLL, and payments subsequently received are applied to principal. Commercial loans are typically charged off in full or charged down to the fair value of the underlying collateral when the borrower's payment is 180 days past due.

We classify consumer loans as nonperforming and stop accruing interest when the borrower's payment is 120 days past due, unless the loan is well-secured and in the process of collection. Any second lien home equity loan with an associated first lien that is 120 days or more past due or in foreclosure, or for which the first mortgage delinquency timeframe is unknown, is reported as a nonperforming loan. Secured loans that are discharged through Chapter 7 bankruptcy and not formally re-affirmed are designated as nonperforming and TDRs. Our charge-off policy for most consumer loans takes effect when payments are 120 days past due. Home equity and residential mortgage loans generally are charged down to net realizable value when payment is 180 days past due. Credit card loans and similar unsecured products continue to accrue interest until the account is charged off at 180 days past due.

Commercial and consumer loans may be returned to accrual status if we are reasonably assured that all contractually due principal and interest are collectible and the borrower has demonstrated a sustained period (generally six months) of repayment performance under the contracted terms of the loan and applicable regulation.

Impaired Loans

A loan is considered to be impaired when, based on current information and events, it is probable that we will be unable to collect all amounts due (both principal and interest) according to the contractual terms of the loan agreement.

All consumer TDRs, regardless of size, and all commercial TDRs and non-accrual commercial loans with an outstanding balance of $2.5 million or greater are individually evaluated for impairment and assigned a specific reserve. Commercial non-accrual loans of less than $2.5 million and all non-accrual consumer loans are aggregated and collectively evaluated for impairment. The amount of the reserve is estimated based on the criteria outlined in the “Allowance for Loan and Lease Losses” section of this note.

Purchased Loans

Purchased performing loans that do not have evidence of deterioration in credit quality at acquisition are recorded at fair value at the acquisition date. Any premium or discount associated with purchased performing loans is recognized as interest income based on the effective yield method of amortization for term loans or the straight-line method of amortization for revolving loans. Subsequent to the purchase date, the methods utilized to estimate the required ALLL for these loans is similar to originated loans; however, we record a provision for loan and lease losses only when the required ALLL exceeds any remaining purchase discount at the product level.

Purchased loans that have evidence of deterioration in credit quality since origination and for which it is probable, at acquisition, that all contractually required payments will not be collected, are deemed PCI. Revolving loans, including lines of credit and credit card loans, leases, and loans where cash flows cannot be reasonably estimated are excluded from PCI accounting. Purchased loans are initially recorded at fair value without recording an allowance for loan losses. Fair value of these loans is determined using market participant assumptions in estimating the amount and timing of both principal and interest cash flows expected to be collected, as adjusted for an estimate of future credit losses and prepayments, and then a market-based discount rate is applied to those cash flows. PCI loans that have similar risk characteristics, primarily credit risk, collateral type and interest rate risk, and are homogeneous in size, are pooled and accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. PCI loans that cannot be aggregated into a pool are accounted for individually.

The excess of cash flows expected to be collected, measured as of the acquisition date, over the estimated fair value is referred to as the “accretable yield” and is recognized in interest income over the remaining life of the loan or pool using the effective yield method. Accordingly, PCI loans are not subject to classification as nonaccrual (and nonperforming) in the same manner as originated loans. Rather, acquired PCI loans are considered to be accruing loans because their interest income relates to the accretable yield recognized on the individual loan or pool and not to the contractual interest payments of the loan. The difference between the contractually required principal and interest payments as of the acquisition date and the cash flows expected to be collected is referred to as the “nonaccretable difference.” The nonaccretable difference, which is not accreted into income, reflects estimated future credit losses and uncollectible contractual payments over the life of the PCI loan.

After we acquire loans determined to be PCI loans, actual cash collections are monitored to determine if they conform to management’s expectations. Revised cash flow expectations are prepared each quarter. A decrease in expected cash flows in subsequent periods may indicate impairment and would require us to establish an ALLL by recording a charge to the provision for loan and lease losses. An increase in expected cash flows in subsequent periods initially reduces any previously established ALLL by the increase in the present value of cash flows expected to be collected, and requires us to recalculate the amount of accretable yield for the PCI loan or pool. The adjustment of accretable yield due to an increase in expected cash flows is accounted for as a change in estimate. The additional cash flows expected to be collected are reclassified from the nonaccretable difference to the accretable yield, and the amount of periodic accretion is adjusted accordingly over the remaining life of the PCI loan or pool.

A PCI loan may be derecognized either through receipt of payment (in full or in part) from the borrower, the sale of the loan to a third party, foreclosure of the collateral, or charge-off. If one of these events occurs, the loan is removed from the loan pool, or derecognized if it is accounted for as an individual loan. PCI loans subject to modification are not removed from a PCI pool even if those loans would otherwise be deemed TDRs since the pool, and not the individual loan, represents the unit of account. Individually accounted for PCI loans that are modified in a TDR are no longer classified as PCI loans and are subject to TDR recognition.

Allowance for Loan and Lease Losses

The ALLL represents our estimate of incurred credit losses inherent in the loan portfolio at the balance sheet date. We establish the amount of this allowance by analyzing the quality of the loan portfolio at least quarterly, and more often if deemed necessary. We segregate our loan portfolio between commercial and consumer loans and develop and document our methodology to determine the ALLL accordingly. We believe these portfolio segments represent the most appropriate level for determining our historical loss experience, as well as the level at which we monitor credit quality and risk characteristics of the portfolios. Commercial loans, which generally have larger individual balances, constitute a significant portion of our total loan portfolio. The consumer portfolio typically includes smaller-balance homogeneous loans.

We estimate the appropriate level of our ALLL by applying expected loss rates to existing loans with similar risk characteristics. Expected loss rates for commercial loans are derived from a statistical analysis of our historical default and loss severity experience. The analysis utilizes probability of default and loss given default to assign loan grades using our internal risk rating system. Our expected loss rates are reviewed quarterly and updated as necessary. As of December 31, 2019, the probability of default ratings was based on our default data and internal estimates for the period from January 2008 through October 2019, which encompasses the last downturn period as well as our more recent positive credit experience. We adjust expected loss rates based on calculated estimates of the average time period from initial loss indication to the initial loss recorded for an individual loan.

Expected loss rates for consumer loans are statistically derived from an analysis of our historical default and loss severity experience, and is sensitive to change in delinquency status. Consumer loans are analyzed quarterly in homogeneous product-type pools that share similar risk attributes, including the application of delinquency roll rate models and credit loss severity estimates. Incurred losses that are not yet individually identifiable are measured as the estimate of the average time period for initial loss indication to initial loss recorded for consumer loans.

The ALLL may be adjusted to reflect our current assessment of many qualitative factors that may not be directly measured in the statistical analysis of expected loss, including:

- changes in international, national, regional, and local economic and business conditions;
- changes in the experience, ability, and depth of our lending management and staff;
- changes in lending policies and procedures, including changes in underwriting standards and collection, charge-off, and recovery practices;
- changes in the nature and volume of the loan portfolio, including the existence and effect of any concentrations of credit, and changes in the level of such concentrations;
- changes in the volume and/or severity of past due, nonaccrual, and adversely classified or graded loans; and
- external factors, such as competition, legal developments, and regulatory requirements.

For all consumer loan TDRs, regardless of size, as well as all commercial TDRs and non-accrual commercial loans with an outstanding balance of $2.5 million or greater, we conduct further analysis to determine the probable loss content and assign a specific allowance to the loan if deemed appropriate. We estimate the extent of the individual impairment for commercial loans and TDRs by comparing the recorded investment of the loan with the estimated present value of its future cash flows, the fair value of its underlying collateral, or the loan's observable market price. Secured consumer loan TDRs that are discharged through Chapter 7 bankruptcy and not formally re-affirmed are adjusted to reflect the fair value of the underlying collateral, less costs to sell. Other consumer loan TDRs are assigned a specific allocation based on the estimated present value of future cash flows using the effective interest rate. A specific allowance also may be assigned — even when sources of repayment appear sufficient — if we remain uncertain about whether the loan will be repaid in full. On at least a quarterly basis, we evaluate the appropriateness of our loss estimation methods to reduce differences between estimated incurred losses and actual losses.

Liability for Credit Losses on Lending-Related Commitments

The liability for credit losses inherent in lending-related commitments, such as letters of credit and unfunded loan commitments, is included in “accrued expense and other liabilities” on the balance sheet and established through a charge to the provision for loan and lease losses. We determine the amount of this liability by considering both historical trends and current market conditions quarterly, or more often if deemed necessary.

Fair Value Measurements

Fair value is defined as the price to sell an asset or transfer a liability in an orderly transaction between market participants in the principal market. Therefore, fair value represents an exit price at the measurement date. We value our assets and liabilities based on the principal or most advantageous market where each would be sold (in the case of assets) or transferred (in the case of liabilities). In the absence of observable market transactions, we consider liquidity valuation adjustments to reflect the uncertainty in pricing the instruments.

Valuation inputs can be observable or unobservable. Observable inputs are assumptions based on market data obtained from an independent source. Unobservable inputs are assumptions based on our own information or assessment of assumptions used by other market participants in pricing the asset or liability. Our unobservable inputs are based on the best and most current information available on the measurement date.

All inputs, whether observable or unobservable, are ranked in accordance with a prescribed fair value hierarchy that gives the highest ranking to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest ranking to unobservable inputs (Level 3). Fair values for Level 2 assets and liabilities are based on one or a combination of the following factors: (i) quoted market prices for similar assets or liabilities; (ii) observable inputs, such as interest rates or yield curves; or (iii) inputs derived principally from or corroborated by observable market data. The level in the fair value hierarchy ascribed to a fair value measurement in its entirety is based on the lowest level input that is significant to the measurement. Assets and liabilities may transfer between levels based on the observable and unobservable inputs used at the valuation date.

Assets and liabilities are recorded at fair value on a recurring or nonrecurring basis. Nonrecurring fair value adjustments are typically recorded as a result of the application of lower of cost or fair value accounting; or impairment. At a minimum, we conduct our valuations quarterly.

Additional information regarding fair value measurements and disclosures is provided in Note 6 (“Fair Value Measurements”).

Short-Term Investments

Short-term investments consist of segregated, interest-bearing deposits due from banks, the Federal Reserve, and certain non-U.S. banks as well as reverse repurchase agreements.

Trading Account Assets

Trading account assets are debt and equity securities, as well as commercial loans, that we purchase and hold but intend to sell in the near term. These assets are reported at fair value. Realized and unrealized gains and losses on trading account assets are reported in “other income” on the income statement.

Securities

Securities available for sale. Debt securities that we intend to hold for an indefinite period of time but that may be sold in response to changes in interest rates, prepayment risk, liquidity needs, or other factors are classified as available-for-sale and reported at fair value. Realized gains and losses resulting from sales of securities using the specific identification method, are included in “other income” on the income statement. Unrealized gains and losses (net of income taxes) deemed temporary are recorded in equity as a component of AOCI. Other-than-temporary unrealized losses on debt securities are included in “other income” on the income statement when the loss is attributable to credit. Other-than-temporary unrealized losses attributable to factors other than credit are recorded in AOCI. For additional information, refer to Note 7 (“Securities”).

“Other securities” held in the available-for-sale portfolio consist of convertible preferred stock of privately held companies.

Held-to-maturity securities. Debt securities that we have the intent and ability to hold until maturity are classified as held-to-maturity and are carried at cost and adjusted for amortization of premiums and accretion of discounts using the interest method. This method produces a constant rate of return on the adjusted carrying amount. “Other securities” held in the held-to-maturity portfolio consist of foreign bonds and capital securities. If any of the value of a held-to-maturity security is determined to be unrecoverable, impairment will be recorded.

Other Investments

Other investments include equity and mezzanine instruments as well as other types of investments that generally are carried at the alternative cost method. The alternative cost method results in these investments being recorded at cost, less any impairment, plus or minus changes resulting from observable market transactions. Adjustments are included in “other income” on the income statement.

Derivatives and Hedging

All derivatives are recognized on the balance sheet at fair value in “accrued income and other assets” or “accrued expense and other liabilities.” The net increase or decrease in derivatives is included in “other operating activities, net” within the statement of cash flows. Accounting for changes in fair value (i.e., gains or losses) of derivatives differs depending on whether the derivative has been designated and qualifies as part of a hedge relationship, and on the type of hedge relationship. For derivatives that are not in a hedge relationship, any gain or loss, as well as any premium paid or received, is recognized immediately in earnings in “corporate services income” or “other income” on the income statement, depending whether the derivative is for customer accommodation or risk management, respectively. A derivative that is designated and qualifies as a hedging instrument must be designated as a fair value hedge, a cash flow hedge, or a hedge of a net investment in a foreign operation. Changes in the fair value of a hedging instrument are reflected in the same income statement line as the earnings effect of the change in fair value of the hedged item attributable to the hedged risk.

A fair value hedge is used to limit exposure to changes in the fair value of existing assets, liabilities, and commitments caused by changes in interest rates or other economic factors. The change in the fair value of an instrument designated as a fair value hedge is recorded in earnings at the same time as a change in fair value of the hedged item attributable to the hedged risk.

A cash flow hedge is used to minimize the variability of future cash flows that is caused by changes in interest rates or other economic factors. The gain or loss on a cash flow hedge is recorded as a component of AOCI on the balance sheet and reclassified to earnings in the same period in which the hedged transaction affects earnings (e.g., when we incur variable-rate interest on debt, earn variable-rate interest on loans, or sell commercial real estate loans).

A net investment hedge is used to hedge the exposure of changes in the carrying value of investments as a result of changes in the related foreign exchange rates. The gain or loss on a net investment hedge is recorded as a component of AOCI on the balance sheet when the terms of the derivative match the notional and currency risk being hedged. The amount in AOCI is reclassified into income when the hedged transaction affects earnings (e.g., when we dispose or liquidate a foreign subsidiary).

Hedge “effectiveness” is determined by the extent to which changes in the fair value of a derivative instrument offset changes in the fair value, cash flows, or carrying value attributable to the risk being hedged. If the relationship between the change in the fair value of the derivative instrument and the change in the hedged item falls within a range considered to be the industry norm, the hedge is considered “highly effective” and qualifies for hedge accounting. A hedge is “ineffective” if the relationship between the changes falls outside the acceptable range. In that case, hedge accounting is discontinued on a prospective basis. Hedge effectiveness is tested at least quarterly.

We take into account the impact of bilateral collateral and master netting agreements that allow us to settle all derivative contracts held with a single counterparty on a net basis, and to offset the net derivative position with the related cash collateral when recognizing derivative assets and liabilities. As a result, we could have derivative contracts with negative fair values included in derivative assets on the balance sheet and contracts with positive fair values included in derivative liabilities. Derivative assets and derivative liabilities are recorded within “accrued income and other assets” and “accrued expense and other liabilities,” respectively.

Additional information regarding the accounting for derivatives is provided in Note 8 (“Derivatives and Hedging Activities”).

Loan Sales and Securitizations

We sell and at times may securitize loans and other financial assets. We recognize the sale and securitization of loans or other financial assets when the transferred assets are legally isolated from our creditors and the appropriate accounting criteria are met. When we securitize loans or other financial assets, we may retain a portion of the securities issued, including senior interests, subordinated interests, interest-only strips, servicing rights, and other interests, all of which are considered retained interests in the transferred assets. The interests are initially measured at fair value which is based on independent third party market prices or market prices for similar assets. If market prices are not available, fair value is estimated based on the present value of expected future cash flows using assumptions as to discount rates, interest rates, prepayment speeds, and credit losses. Loans sold or securitized are removed from the balance sheet and a net gain or loss is recognized in “other income” at the time of sale. Gains or losses recognized depend on the fair value of the loans sold and the retained interests at the date of sale.

Servicing Assets

We service commercial real estate and residential mortgage loans. Servicing assets and liabilities purchased or retained are initially measured at fair value and are recorded as a component of “accrued income and other assets” on the balance sheet. When no ready market value (such as quoted market prices, or prices based on sales or purchases of similar assets) is available to determine the fair value of servicing assets, fair value is determined by calculating the present value of future cash flows associated with servicing the loans. This calculation is based on a number of assumptions, including the market cost of servicing, the discount rate, the prepayment rate, and the default rate.

We account for our servicing assets using the amortization method. The amortization of servicing assets is determined in proportion to, and over the period of, the estimated net servicing income and recorded in “mortgage servicing fees” on the income statement.

Servicing assets are evaluated quarterly for possible impairment. This process involves stratifying the assets based upon one or more predominant risk characteristics and determining the fair value of each class. The characteristics may include financial asset type, size, interest rate, date of origination, term and geographic location. If the evaluation indicates that the carrying amount of the servicing assets exceeds their fair value, the carrying amount is reduced by recording a charge to income in the amount of such excess and establishing a valuation reserve allowance. If impairment is determined to be other-than-temporary, a direct write-off of the carrying amount would be recorded. Additional information pertaining to servicing assets is included in Note 9 (“Mortgage Servicing Assets”).

Leases

For leases where Key is the lessee that have initial terms greater than one year, right-of-use assets and corresponding lease liabilities are reported on the balance sheet. Leases with an initial term of less than one year are not recorded on the balance sheet. Our leases where Key is the lessee are primarily classified as operating leases. Operating lease expense is recognized in "net occupancy" and "equipment"on a straight-line basis over the lease term. For additional information, see Note 10 (“Leases”).

Premises and Equipment

Premises and equipment, including leasehold improvements, are stated at cost less accumulated depreciation and amortization. We determine depreciation of premises and equipment using the straight-line method over the estimated useful lives of the particular assets. Leasehold improvements are amortized using the straight-line method over the shorter of their useful lives or terms of the leases. Premises and equipment are evaluated for impairment whenever events or circumstances indicate that the carrying value of the asset may not be recoverable.

Goodwill and Other Intangible Assets

Goodwill represents the amount by which the cost of net assets acquired in a business combination exceeds their fair value. Goodwill is assigned to reporting units as of the acquisition date based on the expected benefit to such reporting unit from the synergies of the business combination. Goodwill is not amortized. Goodwill is tested at the reporting unit level for impairment, at least annually as of October 1, or when indicators of impairment exist.

We may elect to perform a qualitative analysis to determine whether or not it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If we elect to bypass this qualitative analysis, or conclude via qualitative analysis that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying value, a two-step goodwill impairment test is performed. In the first step, the fair value of each reporting unit is compared with its carrying value. If the fair value is greater than the carrying value, then the reporting unit's goodwill is deemed not to be impaired. If the fair value is less than the carrying value, then the second step is performed, which measures the amount of impairment by comparing the carrying amount of goodwill to its implied fair value. If the implied fair value of the goodwill exceeds the carrying amount, there is no impairment. If the carrying amount exceeds the implied fair value of the goodwill, an impairment charge is recorded for the excess.

The amount of capital being allocated to our reporting units as a proxy for the carrying value is based on risk-based regulatory capital requirements. Fair values are estimated using an equal combination of market and income approaches. The market approach incorporates comparable public company multiples along with data related to recent merger and acquisition activity. The income approach consists of discounted cash flow modeling that utilizes internal forecasts and various other inputs and assumptions. A multi-year internal forecast is prepared for each reporting unit and a terminal growth rate is estimated for each one based on market expectations of inflation and economic conditions in the financial services industry. Earnings projections for reporting units are adjusted for after tax cost savings expected to be realized by a market participant. The discount rate applied to our cash flows is derived from the CAPM. The buildup to the discount rate includes a risk-free rate, 5-year adjusted beta based on peer companies, a market equity risk premium, a size premium and a company specific risk premium. The discount rates differ between our reporting units as they have different levels of risk. A sensitivity analysis is typically performed on key assumptions, such as the discount rates and cost savings estimates.

Other intangible assets with finite lives are amortized on either an accelerated or straight-line basis. We monitor for impairment indicators for goodwill and other intangible assets on a quarterly basis. Additional information pertaining to goodwill and other intangible assets is included in Note 12 (“Goodwill and Other Intangible Assets”).

Business Combinations

We account for our business combinations using the acquisition method of accounting. Under this accounting method, the acquired company’s assets and liabilities are recorded at fair value at the date of acquisition, except as provided for by the applicable accounting guidance, and the results of operations of the acquired company are combined with Key’s results from the date of acquisition forward. Acquisition costs are expensed when incurred. The difference between the purchase price and the fair value of the net assets acquired (including identifiable intangible assets) is recorded as goodwill. Our accounting policy for intangible assets is summarized in this note under the heading “Goodwill and Other Intangible Assets.”

Additional information regarding acquisitions is provided in Note 15 (“Acquisitions, Divestiture, and Discontinued Operations”).

Securities Financing Activities

We enter into repurchase agreements to finance overnight customer sweep deposits. We also enter into repurchase and reverse repurchase agreements to settle other securities obligations. We account for these securities financing agreements as collateralized financing transactions. Repurchase and reverse repurchase agreements are recorded on the balance sheet at the amounts that the securities will be subsequently sold or repurchased. Securities borrowed transactions are recorded on the balance sheet at the amounts of cash collateral advanced. While our securities financing agreements incorporate a right of set off, the assets and liabilities are reported on a gross basis. Reverse repurchase agreements and securities borrowed transactions are included in "short-term investments" on the balance sheet; repurchase agreements are included in "federal funds purchased and securities sold under repurchase agreements." Fees received in connection with these transactions are recorded in interest income; fees paid are recorded in interest expense.

Additional information regarding securities financing activities is included in Note 16 ("Securities Financing Activities").

Contingencies and Guarantees

We recognize liabilities for the fair value of our obligations under certain guarantees issued. These liabilities are included in "accrued expense and other liabilities" on the balance sheet. If we receive a fee for a guarantee requiring liability recognition, the amount of the fee represents the initial fair value of the "stand ready" obligation. If there is no fee, the fair value of the stand ready obligation is determined using expected present value measurement techniques, unless observable transactions for comparable guarantees are available. The subsequent accounting for these stand ready obligations depends on the nature of the underlying guarantees. We account for our release from risk under a particular guarantee when the guarantee expires or is settled, or by a systematic and rational amortization method, depending on the risk profile of the guarantee.

Contingent liabilities may result from litigation, claims and assessments, loss or damage to Key. We recognize liabilities from contingencies when a loss is probable and can be reasonably estimated.

Additional information regarding contingencies and guarantees is included in Note 22 ("Commitments, Contingent Liabilities, and Guarantees").

Revenue Recognition

We recognize revenues as they are earned based on contractual terms, as transactions occur, or as services are provided and collectability is reasonably assured. Our principal source of revenue is interest income from loans and investments. We also earn noninterest income from various banking and financial services offered through both the Commercial and Consumer banks.

Interest Income. The largest source of revenue for us is interest income. Interest income is primarily recognized on an accrual basis according to nondiscretionary formulas in written contracts, such as loan agreements or securities contracts.

Noninterest Income. We earn noninterest income through a variety of financial and transaction services provided to commercial and consumer clients. Revenue is recorded for noninterest income based on the contractual terms for the service or transaction performed. In certain circumstances, noninterest income is reported net of associated expenses.

Trust and Investment Services Income. Trust and investment services revenues include brokerage commissions trust and asset management commissions.

Revenue from trade execution and brokerage services is earned through commissions from trade execution on behalf of clients. Revenue from these transactions is recognized at the trade date. Any ongoing service fees are recognized on a monthly basis as services are performed.

Trust and asset management services include asset custody and investment management services provided to individual and institutional customers. Revenue is recognized monthly based on a minimum annual fee, and the market value of assets in custody. Additional fees are recognized for transactional activity at a point in time.

Investment Banking and Debt Placement Fees. Investment banking and debt placement fees primarily represent revenues earned by KeyBanc Capital Markets for various corporate services including advisory, debt placement and underwriting. Revenues for these services are recorded at a point in time, upon completion of a contractually identified transaction, or when an advisory opinion is provided. Investment banking and debt placement costs are reported on a gross basis within other expense on the income statement.

Service Charges on Deposit Accounts. Revenue from service charges on deposit accounts is earned through cash management, wire transfer, and other deposit-related services as well as overdraft, non-sufficient funds, account management and other deposit-related fees. Revenue is recognized for these services either over time, corresponding with deposit accounts' monthly cycle, or at a point in time for transactional related services and fees. Certain reward costs are netted within revenues from service charges on deposits.

Corporate Services Income. Corporate services income includes various ancillary service revenue including letter of credit fees, loan fees, and certain capital market fees. Revenue from these fees is recorded in a manner that reflects the timing of when transactions occur, and as services are provided.

Cards and Payments income. Cards and payments income includes interchange fees from consumer credit and debit cards processed through card association networks, merchant services, and other card related services. Interchange rates are generally set by the credit card associations and based on purchase volumes and other factors. Interchange fees are recognized as transactions occur. Certain card network costs and reward costs are netted within interchange revenues. Merchant services income represents account management fees and transaction fees charged to merchants for the processing of card association network transactions. Merchant services revenue is recognized as transactions occur, or as services are performed.

Corporate-Owned Life Insurance Income. Income from corporate-owned life insurance primarily represents changes in the cash surrender value of life insurance policies held on certain key employees. Revenue is recognized in each period based on the change in the cash surrender value during the period.

Stock-Based Compensation

Stock-based compensation is measured using the fair value method of accounting on the grant date. The measured cost is recognized over the period during which the recipient is required to provide service in exchange for the award. We estimate expected forfeitures when stock-based awards are granted and record compensation expense only for awards that are expected to vest. Compensation expense related to awards granted to employees is recorded in "personnel expense" on the Consolidated Statements of Income while compensation expense related to awards granted to directors is recorded in "other expense."

We recognize compensation expense for stock-based, mandatory deferred incentive compensation awards using the accelerated method of amortization over a period of approximately 5 years (the current year performance period and a four-year vesting period, which generally starts in the first quarter following the performance period).

We estimate the fair value of options granted using the Black-Scholes option-pricing model, as further described in Note 17 ("Stock-Based Compensation"). Employee stock options typically become exercisable at the rate of 25% per year, beginning one year after the grant date. Options expire no later than 10 years after their grant date. We recognize stock-based compensation expense for stock options with graded vesting using an accelerated method of amortization.

We use shares repurchased under our annual capital plan submitted to our regulators (treasury shares) for share issuances under all stock-based compensation programs.

Income Taxes

Deferred tax assets and liabilities are determined based on temporary differences between financial statement asset and liability amounts and their respective tax bases, and are measured using enacted tax laws and rates that are expected to apply in the periods in which the deferred tax assets or liabilities are expected to be realized. Deferred tax assets are also recorded for any tax attributes, such as tax credit and net operating loss carryforwards. The net balance of deferred tax assets and liabilities is reported in “Accrued income and other assets” or “Accrued expense and other liabilities” in the consolidated balance sheets, as appropriate. Subsequent changes in the tax laws require adjustment to these assets and liabilities with the cumulative effect included in the provision for income taxes for the period in which the change is enacted. A valuation allowance is recognized for a deferred tax asset if, based on the weight of available evidence, it is more-likely-than-not that some portion or all of the deferred tax asset will not be realized.

Earnings Per Share

Basic net income per common share is calculated using the two-class method. The two-class method is an earnings allocation formula that determines earnings per share for each share of common stock and participating securities according to dividends declared (distributed earnings) and participation rights in undistributed earnings. Distributed and undistributed earnings are allocated between common and participating security shareholders based on their respective rights to receive dividends. Nonvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents are considered participating securities (e.g., nonvested service-based restricted stock units). Undistributed net losses are not allocated to nonvested restricted shareholders, as these shareholders do not have a contractual obligation to fund the incurred losses. Net income attributable to common shares is then divided by the weighted-average number of common shares outstanding during the period.

Diluted net income per common share is calculated using the more dilutive of either the treasury method or the two-class method. The dilutive calculation considers the potential dilutive effect of common stock equivalents determined under the treasury stock method. Common stock equivalents include stock options and service- and performance-based restricted stock and stock units granted under our stock plans. Net income attributable to common shares is then divided by the total of weighted-average number of common shares and common stock equivalents outstanding during the period.

Accounting Guidance Adopted in 2020

Standard	Date of Adoption	Description	Effect on Financial Statements or Other Significant Matters
ASU 2016-13, *Measurement of Credit Losses on Financial Instruments* ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments— Credit Losses* *ASU 2019-04, Codification Improvements to Topic 326, Financial Instruments— Credit Losses* ASU 2019-05, *Financial Instruments— Credit Losses: Targeted Transition Relief* ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses* ASU 2020-02, *Financial Instruments—Credit Losses (Topic 326)— Amendments to SEC Paragraphs*	January 1, 2020	The ASUs amend ASC Topic 326, *Financial Instruments-Credit Losses,* and significantly change how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The standard replaces today's "incurred loss" approach with an "expected loss" model for instruments such as loans and held-to-maturity securities that are measured at amortized cost. The standard requires credit losses relating to available-for-sale debt securities to be recorded through an allowance rather than a reduction of the carrying amount. It also changes the accounting for purchased credit-impaired debt securities and loans. The ASUs retain many of the current disclosure requirements in current GAAP and expand certain disclosure requirements. The new guidance also allows optional relief for certain instruments measured at amortized cost with an option to irrevocably elect the fair value option in ASC Topic 825, *Financial Instruments.*	On January 1, 2020, we adopted ASC 326, *Financial Instruments-Credit Losses*, using the modified retrospective method. This new guidance affects the accounting for our loans, debt securities held to maturity and available for sale, and liabilities for credit losses on unfunded lending related commitments as well as purchased financial assets with a more-than insignificant amount of credit deterioration since origination. Our cross-functional implementation team, including finance, credit, and modeling, has completed the development and testing of loss forecasting models, including establishment of macroeconomic forecasting methodologies and approaches to meet the requirements of the new guidance. We completed parallel runs through the third and fourth quarters of 2019. We utilized a two-year reasonable and supportable forecast period for all portfolio segments and reverted to our historical loss experience outside of the forecast period over 1 year, leveraging historical macroeconomic variables. Based on our expectations of macroeconomic forecasts and our loans and net investment in leases as of January 1, 2020, we expect the allowance for loan and lease losses to increase by approximately 20% to 25% as compared to our current reserve levels as a result of the adoption of this guidance. The estimated allowance for loan and lease losses on longer duration consumer loans and lines of credit is expected to more than triple to cover the full remaining expected life of loans and commitments. The estimated overall increase is offset by an expected decrease in the allowance for loan and lease losses for our shorter duration commercial loans and leases. We do not expect to record an allowance for credit losses on available-for-sale or held-to-maturity debt securities as a result of the adoption of this guidance. The allowance for credit losses to be recorded at the January 1, 2020 transition date may differ from our estimate due to finalization of certain accounting, reporting, and governance processes.
ASU 2017-04, *Simplifying the Test for Goodwill Impairment*	January 1, 2020	The ASU amends ASC Topic 350, *Intangibles - Goodwill and Other* and eliminates the second step of the test for goodwill impairment. Under the new guidance, entities will compare the fair value of a reporting unit with its carrying amount. If the carrying amount exceeds the reporting unit's fair value, the entity is required to recognize an impairment charge for this amount. The new method applies to all reporting units and the performance of a qualitative assessment is still allowable. The guidance should be implemented using a prospective approach.	We will monitor for impairment indicators and conduct our annual goodwill test as of October 1, 2020. The adoption of this accounting guidance is not expected to have a material effect on our financial condition or results of operations.

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Accounting Guidance Adopted in 2019

Standard	Date of Adoption	Description	Effect on Financial Statements or Other Significant Matters
ASU 2016-02, *Leases (Topic 842)* ASU 2018-01, *Leases (Topic 842): Land Easement Practical Expedient* ASU 2018-10, *Codification Improvements to Topic 842* ASU 2018-11, *Leases (Topic 842): Targeted Improvements* ASU 2018-20, *Leases (Topic 842): Narrow Scope Improvements for Lessors* ASU 2019-01, *Codification Improvements to Topic 842*	January 1, 2019	The ASUs create and amend ASC Topic 842, Leases, and supersede Topic 840, Leases. The new guidance requires that a lessee recognize assets and liabilities for leases with lease terms of more than 12 months. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. Leveraged leases that commenced before the effective date of the new guidance are grandfathered. The recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. However, both types of leases are required to be recognized on the balance sheet. ASC 842 requires enhanced disclosures to better understand the amount, timing, and uncertainty of cash flows arising from leases. Qualitative and quantitative disclosures are required to provide additional information about the amounts recorded in the financial statements. Although substantially unchanged, certain amendments provide clarifications related to lessor accounting. The guidance should be implemented using a modified retrospective approach. However, entities may choose to measure and present the changes at the beginning of the earliest period presented or to reflect the changes as of the adoption date.	Key adopted this guidance on January 1, 2019, using the package of practical expedients, which allowed Key to maintain historic lease identification and classification, and permitted Key not to reassess initial direct costs under the new guidance. Key also elected the practical expedient on not separating lease components from nonlease components for all of its leases. Adoption resulted in an increase in right-of-use assets and associated lease liabilities arising from operating leases in which Key is the lessee of approximately $710 million on our Consolidated Balance Sheets at January 1, 2019. Right of use assets, lease liabilities, and other changes as a result of adoption are not reflected in comparable periods presented prior to that date. The adoption of this guidance did not have a material impact on the recognition of operating lease expense in our Consolidated Statements of Income. The amount of the right-of-use assets and associated lease liabilities recorded at adoption was based on the present value of unpaid future minimum lease payments. These payments were discounted using Key's incremental borrowing rate, consistent with what Key would pay to borrow on a collateralized basis over a term similar to each lease. For more information, please see Note 10 ("Leases").
ASU 2017-08, *Premium Amortization on Purchased Callable Debt Securities*	January 1, 2019	The ASU amends ASC Topic 310-20, *Receivables - Nonrefundable Fees and Other Costs*, and shortens the amortization period to the earliest call date for certain callable debt securities held at a premium. Securities held at a discount will continue to be amortized to maturity. The guidance should be implemented on a modified retrospective basis using a cumulative-effect adjustment.	The adoption of this guidance did not have a material effect on our financial condition or results of operations.
ASU 2018-07, *Stock Compensation - Improvements to Nonemployee Share-Based Payment Accounting*	January 1, 2019	The ASU amends ASC Topic 718, *Stock Compensation*, and simplifies the accounting for share based payments granted to nonemployees for goods and services. The guidance should be implemented on a modified retrospective basis using a cumulative-effect adjustment.	The adoption of this guidance did not affect our financial condition or results of operations.
ASU 2018-13, *Fair Value Measurement: Disclosure Framework*	September 30, 2018 (removed disclosures only); January 1, 2019, remaining requirements An entity is permitted to early adopt any removed or modified disclosures upon issuance of this ASU and delay adoption of the additional disclosures until their effective date.	The ASU amends disclosure requirements related to fair value measurements. Specifically, entities are no longer required to disclose transfers between Level 1 and Level 2 of the fair value hierarchy, or qualitatively disclose the valuation process for Level 3 fair value measurements. The updated guidance requires disclosure of the changes in unrealized gains and losses for the period included in Other Comprehensive Income for recurring Level 3 fair value measurements. Entities also will be required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. The additional provisions of the guidance should be adopted prospectively, while the eliminated requirements should be adopted retrospectively.	Key removed the disclosures no longer required by the guidance as of September 30, 2018, and early adopted the additional provisions of the standard in the first quarter of 2019. The adoption of this standard did not result in significant changes to Key's disclosures, and there was no effect to our financial condition or results of operations.
ASU 2018-14, *Changes to the Disclosure Requirements for Defined Benefit Plans*	December 31, 2019 Early adoption	The ASU amends the disclosure requirements for sponsors of defined benefit plans. Entities are required to provide new disclosures, including the weighted-average interest crediting rate for cash balance plans and explanations for the significant gains and losses related to changes in the benefit obligation for the period. Certain existing disclosure requirements are eliminated. The guidance should be adopted using a retrospective approach.	The adoption of this accounting guidance did not result in significant changes to our disclosures, and there was no effect on our financial condition or results of operations. Please see Note 18 ("Employee Benefits") for updated disclosures.

Standard	Date of Adoption	Description	Effect on Financial Statements or Other Significant Matters
ASU 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract*	January 1, 2019 Early adoption	The ASU amends ASC Topic 350-40 to align the accounting for costs incurred in a cloud computing arrangement with the guidance on developing internal use software. Specifically, if a cloud computing arrangement is deemed to be a service contract, certain implementation costs are eligible for capitalization. The new guidance prescribes the balance sheet and income statement presentation and cash flow classification for the capitalized costs and related amortization expense. It also requires additional quantitative and qualitative disclosures. The guidance may be adopted prospectively or retrospectively.	Key early adopted this guidance effective January 1, 2019, on a prospective basis. The adoption of this guidance did not have a material effect on our financial condition or results of operations.
ASU 2019-04, *Codification Improvements to Topic 815, Derivatives and Hedging (ASU Topic #3), and Topic 825, Financial Instruments (ASU Topic #4)*	May 1, 2019 Early adoption upon issuance	The ASU provides technical corrections to previously adopted ASUs 2016-01 and 2017-12 and clarifies issues related to partial-term fair value hedges, fair value hedge basis adjustments, and how to measure changes in fair value of a hedged item. It also clarifies certain issues related to equity securities and the measurement alternative. Amendments related to ASU 2016-01 should be adopted using a modified retrospective approach, except for those related to equity securities without readily determinable fair values for which the measurement alternative is elected, which should be applied prospectively. We elected to apply amendments related to ASU 2017-12 on a prospective basis.	Key early adopted this guidance effective May 1, 2019. The adoption of this accounting guidance did not effect our financial condition or results of operations.

2. Earnings Per Common Share

Basic earnings per share is the amount of earnings (adjusted for dividends declared on our preferred stock) available to each Common Share outstanding during the reporting periods. Diluted earnings per share is the amount of earnings available to each Common Share outstanding during the reporting periods adjusted to include the effects of potentially dilutive Common Shares. Potentially dilutive Common Shares include stock options and other stock-based awards. Potentially dilutive Common Shares are excluded from the computation of diluted earnings per share in the periods where the effect would be antidilutive.

Our basic and diluted earnings per Common Share are calculated as follows:

Year ended December 31, *dollars in millions, except per share amounts*	**2019**	**2018**	**2017**
EARNINGS			
Income (loss) from continuing operations	**$ 1,708**	$ 1,859	$ 1,291
Less: Net income (loss) attributable to noncontrolling interests	**—**	—	2
Income (loss) from continuing operations attributable to Key	**1,708**	1,859	1,289
Less: Dividends on preferred stock	**97**	66	70
Income (loss) from continuing operations attributable to Key common shareholders	**1,611**	1,793	1,219
Income (loss) from discontinued operations, net of taxes	**9**	7	7
Net income (loss) attributable to Key common shareholders	**$ 1,620**	$ 1,800	$ 1,226
WEIGHTED-AVERAGE COMMON SHARES			
Weighted-average Common Shares outstanding (000)	**992,091**	1,040,890	1,072,078
Effect of common share options and other stock awards	**10,163**	13,792	16,515
Weighted-average common shares and potential Common Shares outstanding (000) [(a)]	**1,002,254**	1,054,682	1,088,593
EARNINGS PER COMMON SHARE			
Income (loss) from continuing operations attributable to Key common shareholders	**$ 1.62**	$ 1.72	$ 1.13
Income (loss) from discontinued operations, net of taxes	**.01**	.01	.01
Net income (loss) attributable to Key common shareholders [(b)]	**1.63**	1.73	1.14
Income (loss) from continuing operations attributable to Key common shareholders — assuming dilution	**1.61**	1.70	1.12
Income (loss) from discontinued operations, net of taxes	**.01**	.01	.01
Net income (loss) attributable to Key common shareholders — assuming dilution [(b)]	**1.62**	1.71	1.13

(a) Assumes conversion of Common Share options and other stock awards and/or convertible preferred stock, as applicable.
(b) EPS may not foot due to rounding.

3. Restrictions on Cash, Dividends, and Lending Activities

Federal law requires a depository institution to maintain a prescribed amount of cash or deposit reserve balances with its Federal Reserve Bank. KeyBank maintained average reserve balances aggregating $377 million in 2019 to fulfill these requirements. Currently KeyBank meets the required reserve balances with vault cash, therefore any cash on deposit at the Federal Reserve is not restricted.

Capital distributions from KeyBank and other subsidiaries are our principal source of cash flows for paying dividends on our common and preferred shares, servicing our debt, and financing corporate operations. Federal banking law limits the amount of capital distributions that a bank can make to its holding company without prior regulatory approval. A national bank's dividend-paying capacity is affected by several factors, including net profits (as defined by statute) for the previous two calendar years and for the current year, up to the date the dividend is declared.

During 2019, KeyBank paid $1.2 billion in dividends to KeyCorp. At January 1, 2020, KeyBank had regulatory capacity to pay $920 million in dividends to KeyCorp without prior regulatory approval. At December 31, 2019, KeyCorp held $3.8 billion in cash and short-term investments, which can be used to pay dividends to shareholders, service debt, and finance corporate operations.

4. Loan Portfolio

December 31, *in millions*	**2019**	2018
Commercial and industrial [(a)]	**$ 48,295**	$ 45,753
Commercial real estate:		
Commercial mortgage	**13,491**	14,285
Construction	**1,558**	1,666
Total commercial real estate loans	**15,049**	15,951
Commercial lease financing [(b)]	**4,688**	4,606
Total commercial loans	**68,032**	66,310
Residential — prime loans:		
Real estate — residential mortgage	**7,023**	5,513
Home equity loans	**10,274**	11,142
Total residential — prime loans	**17,297**	16,655
Consumer direct loans	**3,513**	1,809
Credit cards	**1,130**	1,144
Consumer indirect loans	**4,674**	3,634
Total consumer loans	**26,614**	23,242
Total loans [(c)]	**$ 94,646**	$ 89,552

(a) Loan balances include $144 million and $132 million of commercial credit card balances at December 31, 2019, and December 31, 2018, respectively.
(b) Commercial lease financing includes receivables of $15 million and $10 million held as collateral for a secured borrowing at December 31, 2019, and December 31, 2018, respectively. Principal reductions are based on the cash payments received from these related receivables. Additional information pertaining to this secured borrowing is included in Note 20 ("Long-Term Debt").
(c) Total loans exclude loans in the amount of $865 million at December 31, 2019, and $1.1 billion at December 31, 2018, related to the discontinued operations of the education lending business.

5. Asset Quality

We assess the credit quality of the loan portfolio by monitoring net credit losses, levels of nonperforming assets and delinquencies, and credit quality ratings as defined by management.

Credit Quality Indicators

The prevalent risk characteristic for both commercial and consumer loans is the risk of loss arising from an obligor's inability or failure to meet contractual payment or performance terms. Evaluation of this risk is stratified and monitored by the loan risk rating grades assigned for the commercial loan portfolios and the regulatory risk ratings assigned for the consumer loan portfolios.

Most extensions of credit are subject to loan grading or scoring. Loan grades are assigned at the time of origination, verified by credit risk management, and periodically re-evaluated thereafter. This risk rating methodology blends our judgment with quantitative modeling. Commercial loans generally are assigned two internal risk ratings. The first rating reflects the probability that the borrower will default on an obligation; the second rating reflects expected recovery rates on the credit facility. Default probability is determined based on, among other factors, the financial strength of the borrower, an assessment of the borrower's management, the borrower's competitive position within its industry sector, and our view of industry risk in the context of the general economic outlook. Types of exposure, transaction structure, and collateral, including credit risk mitigants, affect the expected recovery assessment.

Commercial Credit Exposure — Excluding PCI
Credit Risk Profile by Creditworthiness Category [(a), (b)]

December 31, *in millions* RATING	Commercial and industrial 2019	Commercial and industrial 2018	RE — Commercial 2019	RE — Commercial 2018	RE — Construction 2019	RE — Construction 2018	Commercial Lease 2019	Commercial Lease 2018	Total 2019	Total 2018
Pass	**$ 46,544**	$ 44,138	**$ 12,914**	$ 13,672	**$ 1,524**	$ 1,537	**$ 4,642**	$ 4,557	**$ 65,624**	$ 63,904
Criticized (Accruing)	**1,439**	1,402	**370**	354	**31**	125	**40**	41	**1,880**	1,922
Criticized (Nonaccruing)	**264**	152	**83**	81	**2**	2	**6**	8	**355**	243
Total	**$ 48,247**	$ 45,692	**$ 13,367**	$ 14,107	**$ 1,557**	$ 1,664	**$ 4,688**	$ 4,606	**$ 67,859**	$ 66,069

(a) Credit quality indicators are updated on an ongoing basis and reflect credit quality information as of the dates indicated.
(b) The term criticized refers to those loans that are internally classified by Key as special mention or worse, which are asset quality categories defined by regulatory authorities. These assets have an elevated level of risk and may have a high probability of default or total loss. Pass rated refers to all loans not classified as criticized.

Consumer Credit Exposure — Excluding PCI
Non-PCI Loans by Refreshed FICO Score [(a)]

December 31, *in millions* FICO SCORE	Residential — Prime 2019	Residential — Prime 2018	Consumer direct loans 2019	Consumer direct loans 2018	Credit cards 2019	Credit cards 2018	Consumer indirect loans 2019	Consumer indirect loans 2018	Total 2019	Total 2018
750 and above	**$ 10,583**	$ 9,794	**$ 1,874**	$ 549	**$ 523**	$ 521	**$ 2,232**	$ 1,647	**$ 15,212**	$ 12,511
660 to 749	**4,823**	4,906	**1,069**	700	**484**	507	**1,652**	1,320	**8,028**	7,433
Less than 660	**1,360**	1,411	**223**	224	**123**	116	**641**	565	**2,347**	2,316
No Score	**261**	213	**344**	333	**—**	—	**149**	102	**754**	648
Total	**$ 17,027**	$ 16,324	**$ 3,510**	$ 1,806	**$ 1,130**	$ 1,144	**$ 4,674**	$ 3,634	**$ 26,341**	$ 22,908

(a) Borrower FICO scores provide information about the credit quality of our consumer loan portfolio as they provide an indication as to the likelihood that a debtor will repay their debts. The scores are obtained from a nationally recognized consumer rating agency and are presented in the above table at the dates indicated.

Commercial Credit Exposure — PCI
Credit Risk Profile by Creditworthiness Category [(a), (b)]

December 31, *in millions* RATING	Commercial and industrial 2019	Commercial and industrial 2018	RE — Commercial 2019	RE — Commercial 2018	RE — Construction 2019	RE — Construction 2018	Commercial Lease 2019	Commercial Lease 2018	Total 2019	Total 2018
Pass	**$ 28**	$ 37	**$ 87**	$ 125	**$ 1**	$ 2	**—**	—	**$ 116**	$ 164
Criticized	**20**	24	**37**	53	**—**	—	**—**	—	**57**	77
Total	**$ 48**	$ 61	**$ 124**	$ 178	**$ 1**	$ 2	**—**	—	**$ 173**	$ 241

(a) Credit quality indicators are updated on an ongoing basis and reflect credit quality information as of the dates indicated.
(b) The term criticized refers to those loans that are internally classified by Key as special mention or worse, which are asset quality categories defined by regulatory authorities. These assets have an elevated level of risk and may have a high probability of default or total loss. Pass rated refers to all loans not classified as criticized.

Consumer Credit Exposure — PCI
PCI Loans by Refreshed FICO Score [(a)]

December 31, *in millions* FICO SCORE	Residential — Prime 2019	Residential — Prime 2018	Consumer direct loans 2019	Consumer direct loans 2018	Credit cards 2019	Credit cards 2018	Consumer indirect loans 2019	Consumer indirect loans 2018	Total 2019	Total 2018
750 and above	**$ 103**	$ 137	**1**	—	**—**	—	**—**	—	**$ 104**	$ 137
660 to 749	**91**	95	**$ 1**	$ 1	**—**	—	**—**	—	**92**	96
Less than 660	**70**	97	**1**	2	**—**	—	**—**	—	**71**	99
No Score	**6**	2	**—**	—	**—**	—	**—**	—	**6**	2
Total	**$ 270**	$ 331	**$ 3**	$ 3	**—**	—	**—**	—	**$ 273**	$ 334

(a) Borrower FICO scores provide information about the credit quality of our consumer loan portfolio as they provide an indication as to the likelihood that a debtor will repay their debts. The scores are obtained from a nationally recognized consumer rating agency and are presented in the above table at the dates indicated.

Nonperforming and Past Due Loans

Our policies for determining past due loans, placing loans on nonaccrual, applying payments on nonaccrual loans, and resuming accrual of interest for our commercial and consumer loan portfolios are disclosed in Note 1 ("Summary of Significant Accounting Policies") under the heading "Nonperforming Loans."

The following aging analysis of current and past due loans as of December 31, 2019, and December 31, 2018, provides further information regarding Key's credit exposure.

Aging Analysis of Loan Portfolio [(a)]

December 31, 2019 in millions	Current	30-59 Days Past Due [(b)]	60-89 Days Past Due [(b)]	90 and Greater Days Past Due [(b)]	Non-performing Loans	Total Past Due and Non-performing Loans	Purchased Credit Impaired	Total Loans [(c), (d)]
LOAN TYPE								
Commercial and industrial	$ 47,768	$ 110	$ 52	$ 53	$ 264	$ 479	$ 48	$ 48,295
Commercial real estate:								
Commercial mortgage	13,258	8	5	13	83	109	124	13,491
Construction	1,551	3	—	1	2	6	1	1,558
Total commercial real estate loans	14,809	11	5	14	85	115	125	15,049
Commercial lease financing	4,647	22	11	2	6	41	—	4,688
Total commercial loans	$ 67,224	$ 143	$ 68	$ 69	$ 355	$ 635	$ 173	$ 68,032
Real estate — residential mortgage	$ 6,705	$ 7	$ 5	$ 1	$ 48	$ 61	$ 257	$ 7,023
Home equity loans	10,071	30	10	5	145	190	13	10,274
Consumer direct loans	3,484	10	5	7	4	26	3	3,513
Credit cards	1,104	6	5	12	3	26	—	1,130
Consumer indirect loans	4,609	32	8	3	22	65	—	4,674
Total consumer loans	$ 25,973	$ 85	$ 33	$ 28	$ 222	$ 368	$ 273	$ 26,614
Total loans	$ 93,197	$ 228	$ 101	$ 97	$ 577	$ 1,003	$ 446	$ 94,646

(a) Amounts in table represent recorded investment and exclude loans held for sale. Recorded investment represents the face amount of the loan increased or decreased by applicable accrued interest, net deferred loan fees and costs, and unamortized premium or discount, and reflects direct charge-offs.
(b) Past due loan amounts exclude purchased impaired loans, even if contractually past due (or if we do not expect to collect principal or interest in full based on the original contractual terms), as we are currently accreting income over the remaining term of the loans.
(c) Net of unearned income, net deferred loan fees and costs, and unamortized discounts and premiums.
(d) Future accretable yield related to PCI loans is not included in the analysis of the loan portfolio.

December 31, 2018 in millions	Current	30-59 Days Past Due [(b)]	60-89 Days Past Due [(b)]	90 and Greater Days Past Due [(b)]	Non-performing Loans	Total Past Due and Non-performing Loans	Purchased Credit Impaired	Total Loans [(c), (d)]
LOAN TYPE								
Commercial and industrial	$ 45,375	$ 89	$ 31	$ 45	$ 152	$ 317	$ 61	$ 45,753
Commercial real estate:								
Commercial mortgage	13,957	27	17	25	81	150	178	14,285
Construction	1,646	—	13	3	2	18	2	1,666
Total commercial real estate loans	15,603	27	30	28	83	168	180	15,951
Commercial lease financing	4,580	12	1	4	9	26	—	4,606
Total commercial loans	$ 65,558	$ 128	$ 62	$ 77	$ 244	$ 511	$ 241	$ 66,310
Real estate — residential mortgage	$ 5,119	$ 11	$ 3	$ 4	$ 62	$ 80	$ 314	$ 5,513
Home equity loans	10,862	31	12	10	210	263	17	11,142
Consumer direct loans	1,780	11	5	6	4	26	3	1,809
Credit cards	1,119	6	5	12	2	25	—	1,144
Consumer indirect loans	3,573	31	7	3	20	61	—	3,634
Total consumer loans	$ 22,453	$ 90	$ 32	$ 35	$ 298	$ 455	$ 334	$ 23,242
Total loans	$ 88,011	$ 218	$ 94	$ 112	$ 542	$ 966	$ 575	$ 89,552

(a) Amounts in table represent recorded investment and exclude loans held for sale. Recorded investment represents the face amount of the loan increased or decreased by applicable accrued interest, net deferred loan fees and costs, and unamortized premium or discount, and reflects direct charge-offs.
(b) Past due loan amounts exclude purchased impaired loans, even if contractually past due (or if we do not expect to collect principal or interest in full based on the original contractual terms), as we are currently accreting income over the remaining term of the loans.
(c) Net of unearned income, net deferred loan fees and costs, and unamortized discounts and premiums.
(d) Future accretable yield related to PCI loans is not included in the analysis of the loan portfolio.

At December 31, 2019, the approximate carrying amount of our commercial nonperforming loans outstanding represented 76% of their original contractual amount owed, total nonperforming loans outstanding represented 80% of their original contractual amount owed, and nonperforming assets in total were carried at 88% of their original contractual amount owed.

Nonperforming loans reduced expected interest income by $31 million, $30 million, and $25 million for each of the twelve months ended December 31, 2019, December 31, 2018, and December 31, 2017, respectively.

The following tables set forth a further breakdown of individually impaired loans:

in millions	December 31, 2019 Recorded Investment [a]	December 31, 2019 Unpaid Principal Balance [b]	December 31, 2019 Specific Allowance [c]	December 31, 2018 Recorded Investment [a]	December 31, 2018 Unpaid Principal Balance [b]	December 31, 2018 Specific Allowance [c]
With no related allowance recorded:						
Commercial and industrial	**$ 156**	**$ 224**	**—**	$ 118	$ 175	—
Commercial real estate:						
Commercial mortgage	**65**	**77**	**—**	64	70	—
Total commercial real estate loans	**65**	**77**	**—**	64	70	—
Total commercial loans	**221**	**301**	**—**	182	245	—
Real estate — residential mortgage	**3**	**4**	**—**	4	5	—
Home equity loans	**45**	**51**	**—**	49	56	—
Consumer direct loans	**—**	**1**	**—**	1	1	—
Consumer indirect loans	**2**	**4**	**—**	2	4	—
Total consumer loans	**50**	**60**	**—**	56	66	—
Total loans with no related allowance recorded	**271**	**361**	**—**	238	311	—
With an allowance recorded:						
Commercial and industrial	**97**	**97**	**$ 17**	44	47	$ 5
Commercial real estate:						
Commercial mortgage	**—**	**—**	**—**	2	3	1
Total commercial real estate loans	**—**	**—**	**—**	2	3	1
Total commercial loans	**97**	**97**	**17**	46	50	6
Real estate — residential mortgage	**40**	**59**	**4**	45	70	3
Home equity loans	**81**	**88**	**9**	78	85	8
Consumer direct loans	**4**	**4**	**—**	3	3	—
Credit cards	**3**	**3**	**—**	3	3	—
Consumer indirect loans	**33**	**33**	**3**	34	34	2
Total consumer loans	**161**	**187**	**16**	163	195	13
Total loans with an allowance recorded	**258**	**284**	**33**	209	245	19
Total	**$ 529**	**$ 645**	**$ 33**	$ 447	$ 556	$ 19

(a) The Recorded Investment represents the face amount of the loan increased or decreased by applicable accrued interest, net deferred loan fees and costs, and unamortized premium or discount, and reflects direct charge-offs. This amount is a component of total loans on our consolidated balance sheet.
(b) The Unpaid Principal Balance represents the customer's legal obligation to us.
(c) See Note 1 ("Summary of Significant Accounting Policies") under the heading "Impaired Loans" for a description of the specific allowance methodology.

The following table sets forth a further breakdown of average individually impaired loans reported by Key:

Average Recorded Investment [a] *in millions*	Twelve Months Ended December 31, 2019	2018	2017
Commercial and industrial	**$ 208**	$ 149	$ 210
Commercial real estate:			
Commercial mortgage	**65**	39	9
Construction	**—**	—	—
Total commercial real estate loans	**65**	39	9
Total commercial loans	**273**	188	219
Real estate — residential mortgage	**46**	49	50
Home equity loans	**127**	122	121
Consumer direct loans	**4**	4	3
Credit cards	**3**	3	3
Consumer indirect loans	**35**	35	32
Total consumer loans	**215**	213	209
Total	**$ 488**	$ 401	$ 428

(a) The Recorded Investment represents the face amount of the loan increased or decreased by applicable accrued interest, net deferred loan fees and costs, and unamortized premium or discount, and reflects direct charge-offs. This amount is a component of total loans on our consolidated balance sheet.

For the twelve months ended December 31, 2019, December 31, 2018, and December 31, 2017, interest income recognized on the outstanding balances of accruing impaired loans totaled $14 million, $13 million, and $9 million, respectively.

TDRs

We classify loan modifications as TDRs when a borrower is experiencing financial difficulties and we have granted a concession without commensurate financial, structural, or legal consideration. Acquired loans that were previously modified by First Niagara in a TDR are no longer classified as TDRs at the Acquisition Date. An acquired loan may only be classified as a TDR if a modification meeting the above TDR criteria is performed after the Acquisition Date. PCI loans cannot be classified as TDRs. All commercial and consumer loan TDRs, regardless of size, are individually evaluated for impairment to determine the probable loss content and are assigned a specific loan allowance. This designation has the effect of moving the loan from the general reserve methodology (i.e., collectively evaluated) to the specific reserve methodology (i.e., individually evaluated) and may impact the ALLL through a charge-off or increased loan loss provision. These components affect the ultimate allowance level.

As TDRs are individually evaluated for impairment under the specific reserve methodology, subsequent defaults do not generally have a significant additional impact on the ALLL. Commitments outstanding to lend additional funds to borrowers whose loan terms have been modified in TDRs are $4 million and $5 million at December 31, 2019, and December 31, 2018, respectively.

Our loan modifications are handled on a case-by-case basis and are negotiated to achieve mutually agreeable terms that maximize loan collectability and meet the borrower's financial needs. The consumer TDR other concession category primarily includes those borrowers' debts that are discharged through Chapter 7 bankruptcy and have not been formally re-affirmed. At December 31, 2019, and December 31, 2018, the recorded investment of loans secured by residential real estate in the process of foreclosure was approximately $97 million and $113 million, respectively. At December 31, 2019, and December 31, 2018, we had $35 million and $35 million, respectively, of OREO which included the carrying value of foreclosed residential real estate of approximately $34 million and $35 million, respectively.

The following table shows the period-end post-modification outstanding recorded investment by concession type for our commercial and consumer accruing and nonaccruing TDRs added during the periods indicated:

	Twelve Months Ended December 31,	
in millions	**2019**	**2018**
Commercial loans:		
Extension of maturity date	**$ 11**	15
Payment or covenant modification/deferment	**11**	$ 99
Bankruptcy plan modification	**—**	6
Increase in new commitment or new money	**8**	—
Total	**$ 30**	$ 120
Consumer loans:		
Interest rate reduction	**$ 14**	$ 28
Forgiveness of principal	**—**	—
Other	**29**	38
Total	**$ 43**	$ 66
Total commercial and consumer TDRs	**$ 73**	$ 186

The following table summarizes the change in the post-modification outstanding recorded investment of our accruing and nonaccruing TDRs during the periods indicated:

Year ended December 31, *in millions*	**2019**	**2018**
Balance at beginning of the period	**$ 399**	$ 317
Additions	**112**	228
Payments	**(145)**	(110)
Charge-offs	**(19)**	(36)
Balance at end of period [(a)]	**$ 347**	$ 399

A further breakdown of TDRs included in nonperforming loans by loan category for the periods indicated are as follows:

dollars in millions	December 31, 2019 Number of Loans	December 31, 2019 Pre-modification Outstanding Recorded Investment	December 31, 2019 Post-modification Outstanding Recorded Investment	December 31, 2018 Number of Loans	December 31, 2018 Pre-modification Outstanding Recorded Investment	December 31, 2018 Post-modification Outstanding Recorded Investment
LOAN TYPE						
Nonperforming:						
Commercial and industrial	**51**	**$ 72**	**$ 53**	35	$ 121	$ 85
Commercial real estate:						
Real estate — commercial mortgage	**6**	**64**	**58**	6	66	62
Total commercial real estate loans	**6**	**64**	**58**	6	66	62
Total commercial loans	**57**	**136**	**111**	41	187	147
Real estate — residential mortgage	**181**	**13**	**11**	281	21	20
Home equity loans	**713**	**42**	**41**	1,142	66	63
Consumer direct loans	**172**	**2**	**2**	171	2	1
Credit cards	**368**	**2**	**2**	330	2	2
Consumer indirect loans	**1,131**	**19**	**16**	1,098	18	14
Total consumer loans	**2,565**	**78**	**72**	3,022	109	100
Total nonperforming TDRs	**2,622**	**214**	**183**	3,063	296	247
Prior-year accruing: (a)						
Commercial and industrial	**6**	**30**	**25**	11	37	32
Commercial real estate:						
Real estate — commercial mortgage	**1**	**—**	**—**	2	—	—
Total commercial loans	**7**	**30**	**25**	13	37	32
Real estate — residential mortgage	**493**	**37**	**31**	491	36	30
Home equity loans	**1,751**	**104**	**84**	1,403	82	64
Consumer direct loans	**139**	**4**	**3**	79	4	3
Credit cards	**486**	**3**	**1**	479	3	1
Consumer indirect loans	**714**	**33**	**20**	556	33	22
Total consumer loans	**3,583**	**181**	**139**	3,008	158	120
Total prior-year accruing TDRs	**3,590**	**211**	**164**	3,021	195	152
Total TDRs	**6,212**	**$ 425**	**$ 347**	6,084	$ 491	$ 399

(a) All TDRs that were restructured prior to January 1, 2019, and January 1, 2018, are fully accruing.

Commercial loan TDRs are considered defaulted when principal and interest payments are 90 days past due. Consumer loan TDRs are considered defaulted when principal and interest payments are more than 60 days past due. During the year ended December 31, 2019, there were no commercial loan TDR and 356 consumer loan TDRs with a combined recorded investment of $8 million that experienced payment defaults after modifications resulting in TDR status during 2018. During the year ended December 31, 2018, there were one commercial loan TDRs and 253 consumer loan TDRs with a combined recorded investment of $11 million that experienced payment defaults after modifications resulting in TDR status during 2017. During the year ended December 31, 2017, there were no commercial loan TDRs and 147 consumer loan TDRs with a combined recorded investment of $4 million that experienced payment defaults after modifications resulting in TDR status during 2016.

ALLL and Liability for Credit Losses on Unfunded Lending-Related Commitments

We determine the appropriate level of the ALLL on at least a quarterly basis. The methodology is described in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Allowance for Loan and Lease Losses.”

The ALLL on the acquired non-impaired loan portfolio is estimated using the same methodology as the originated portfolio, however, the estimated ALLL is compared to the remaining accretable yield to determine if an ALLL must be recorded. For PCI loans, Key estimates cash flows expected to be collected quarterly. Decreases in expected cash flows are recognized as impairment through a provision for loan and lease losses and an increase in the ALLL.

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The changes in the ALLL by loan category for the periods indicated are as follows:

in millions	December 31, 2018	Provision	Charge-offs	Recoveries	December 31, 2019
Commercial and industrial	$ 532	**$ 311**	**$ (319)**	**$ 27**	**$ 551**
Real estate — commercial mortgage	142	**7**	**(8)**	**2**	**143**
Real estate — construction	33	**(6)**	**(5)**	**—**	**22**
Commercial lease financing	36	**20**	**(26)**	**5**	**35**
Total commercial loans	743	**332**	**(358)**	**34**	**751**
Real estate — residential mortgage	7	**1**	**(3)**	**2**	**7**
Home equity loans	35	**7**	**(19)**	**8**	**31**
Consumer direct loans	30	**38**	**(41)**	**7**	**34**
Credit cards	48	**36**	**(44)**	**7**	**47**
Consumer indirect loans	20	**27**	**(34)**	**17**	**30**
Total consumer loans	140	**109**	**(141)**	**41**	**149**
Total ALLL — continuing operations	883	**441** (a), (b)	**(499)**	**75**	**900**
Discontinued operations	14	**3**	**(12)**	**5**	**10**
Total ALLL — including discontinued operations	$ 897	**$ 444**	**$ (511)**	**$ 80**	**$ 910**

(a) Excludes a provision for losses on lending-related commitments of $4 million.
(b) Includes the realization of $139 million loss related to a previously disclosed fraud incident.

in millions	December 31, 2017	Provision	Charge-offs	Recoveries	December 31, 2018
Commercial and industrial	$ 529	$ 125	$ (159)	$ 37	$ 532
Real estate — commercial mortgage	133	27	(21)	3	142
Real estate — construction	30	1	—	2	33
Commercial lease financing	43	(2)	(10)	5	36
Total commercial loans	735	151	(190)	47	743
Real estate — residential mortgage	7	1	(3)	2	7
Home equity loans	43	2	(21)	11	35
Consumer direct loans	28	31	(36)	7	30
Credit cards	44	41	(44)	7	48
Consumer indirect loans	20	14	(30)	16	20
Total consumer loans	142	89	(134)	43	140
Total ALLL — continuing operations	877	240 (a)	(324)	90	883
Discontinued operations	16	8	(15)	5	14
Total ALLL — including discontinued operations	$ 893	$ 248	$ (339)	$ 95	$ 897

(a) Excludes a provision for losses on lending-related commitments of $6 million.

in millions	December 31, 2016	Provision	Charge-offs	Recoveries	December 31, 2017
Commercial and industrial	$ 508	$ 114	$ (133)	$ 40	$ 529
Real estate — commercial mortgage	144	(2)	(11)	2	133
Real estate — construction	22	9	(2)	1	30
Commercial lease financing	42	9	(14)	6	43
Total commercial loans	716	130	(160)	49	735
Real estate — residential mortgage	17	(11)	(3)	4	7
Home equity loans	54	4	(30)	15	43
Consumer direct loans	24	32	(34)	6	28
Credit cards	38	45	(44)	5	44
Consumer indirect loans	9	27	(31)	15	20
Total consumer loans	142	97	(142)	45	142
Total ALLL — continuing operations	858	227 (a)	(302)	94	877
Discontinued operations	24	10	(26)	8	16
Total ALLL — including discontinued operations	$ 882	$ 237	$ (328)	$ 102	$ 893

(a) Excludes a provision for losses on lending-related commitments of $2 million.

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A breakdown of the individual and collective ALLL and the corresponding loan balances for the periods indicated are as follows:

December 31, 2019 *in millions*	Allowance			Outstanding			
	Individually Evaluated for Impairment	Collectively Evaluated for Impairment	Purchased Credit Impaired	Loans	Individually Evaluated for Impairment	Collectively Evaluated for Impairment	Purchased Credit Impaired
Commercial and industrial	$ 17	$ 533	$ 1	$ 48,295	$ 253	$ 47,994	$ 48
Commercial real estate:							
Commercial mortgage	—	141	2	13,491	65	13,302	124
Construction	—	22	—	1,558	—	1,557	1
Total commercial real estate loans	—	163	2	15,049	65	14,859	125
Commercial lease financing	—	35	—	4,688	—	4,688	—
Total commercial loans	17	731	3	68,032	318	67,541	173
Real estate — residential mortgage	4	1	2	7,023	43	6,723	257
Home equity loans	9	21	1	10,274	126	10,135	13
Consumer direct loans	—	34	—	3,513	4	3,506	3
Credit cards	—	47	—	1,130	3	1,127	—
Consumer indirect loans	3	27	—	4,674	35	4,639	—
Total consumer loans	16	130	3	26,614	211	26,130	273
Total ALLL — continuing operations	33	861	6	94,646	529	93,671	446
Discontinued operations	2	8	—	865 (a)	23	842 (a)	—
Total ALLL — including discontinued operations	$ 35	$ 869	$ 6	$ 95,511	$ 552	$ 94,513	$ 446

(a) Amount includes $2 million of loans carried at fair value that are excluded from ALLL consideration.

December 31, 2018 *in millions*	Allowance			Outstanding			
	Individually Evaluated for Impairment	Collectively Evaluated for Impairment	Purchased Credit Impaired	Loans	Individually Evaluated for Impairment	Collectively Evaluated for Impairment	Purchased Credit Impaired
Commercial and industrial	$ 5	$ 526	$ 1	$ 45,753	$ 162	$ 45,530	$ 61
Commercial real estate:							
Commercial mortgage	—	139	3	14,285	66	14,041	178
Construction	—	33	—	1,666	—	1,664	2
Total commercial real estate loans	—	172	3	15,951	66	15,705	180
Commercial lease financing	—	36	—	4,606	—	4,606	—
Total commercial loans	5	734	4	66,310	228	65,841	241
Real estate — residential mortgage	3	4	—	5,513	49	5,150	314
Home equity loans	8	26	1	11,142	127	10,998	17
Consumer direct loans	—	30	—	1,809	4	1,802	3
Credit cards	—	48	—	1,144	3	1,141	—
Consumer indirect loans	3	17	—	3,634	36	3,598	—
Total consumer loans	14	125	1	23,242	219	22,689	334
Total ALLL — continuing operations	19	859	5	89,552	447	88,530	575
Discontinued operations	2	12	—	1,073 (a)	23	1,050 (a)	—
Total ALLL — including discontinued operations	$ 21	$ 871	$ 5	$ 90,625	$ 470	$ 89,580	$ 575

(a) Amount includes $2 million of loans carried at fair value that are excluded from ALLL consideration.

The liability for credit losses inherent in lending-related unfunded commitments, such as letters of credit and unfunded loan commitments, is included in "accrued expense and other liabilities" on the balance sheet. We establish the amount of this reserve by considering both historical trends and current market conditions quarterly, or more often if deemed necessary.

Changes in the liability for credit losses on unfunded lending-related commitments are summarized as follows:

Year ended December 31, *in millions*	2019	2018	2017
Balance at beginning of period	**$ 64**	$ 57	$ 55
Provision (credit) for losses on lending-related commitments	**4**	6	2
Balance at end of period	**$ 68**	$ 63	$ 57

PCI Loans

Purchased loans that have evidence of deterioration in credit quality since origination and for which it is probable, at acquisition, that all contractually required payments will not be collected are deemed PCI. Our policies for determining, recording payments on, and derecognizing PCI loans are disclosed in Note 1 (Summary of Significant Accounting Policies) under the heading “Purchases Loans.”

We have PCI loans from two separate acquisitions, one in 2012 and one in 2016. The following tables present the rollforward of the accretable yield and the beginning and ending outstanding unpaid principal balance and carrying amount of all PCI loans for the for the periods indicated:

	Twelve Months Ended December 31,					
	2019			2018		
in millions	Accretable Yield	Carrying Amount	Outstanding Unpaid Principal Balance	Accretable Yield	Carrying Amount	Outstanding Unpaid Principal Balance
Balance at beginning of period	**$ 117**	**$ 571**	**$ 607**	$ 131	$ 738	$ 803
Additions	**—**			—		
Accretion	**(34)**			(42)		
Net reclassifications from non-accretable to accretable	**25**			50		
Payments received, net	**(14)**			(21)		
Disposals	**—**			—		
Loans charged off	**—**			(1)		
Balance at end of period	**$ 94**	**$ 439**	**$ 462**	$ 117	$ 571	$ 607

6. Fair Value Measurements

In accordance with GAAP, Key measures certain assets and liabilities at fair value. Fair value is defined as the price to sell an asset or transfer a liability in an orderly transaction between market participants in our principal market. Additional information regarding our accounting policies for determining fair value is provided in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Fair Value Measurements.”

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Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables present assets and liabilities measured at fair value on a recurring basis at December 31, 2019, and December 31, 2018.

	December 31, 2019				December 31, 2018			
in millions	**Level 1**	**Level 2**	**Level 3**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
ASSETS MEASURED ON A RECURRING BASIS								
Trading account assets:								
U.S. Treasury, agencies and corporations	**—**	**$ 843**	**—**	**$ 843**	—	$ 578	—	$ 578
States and political subdivisions	**—**	**30**	**—**	**30**	—	60	—	60
Other mortgage-backed securities	**—**	**78**	**—**	**78**	—	164	—	164
Other securities	**—**	**44**	**—**	**44**	—	22	—	22
Total trading account securities	**—**	**995**	**—**	**995**	—	824	—	824
Commercial loans	**—**	**45**	**—**	**45**	—	25	—	25
Total trading account assets	**—**	**1,040**	**—**	**1,040**	—	849	—	849
Securities available for sale:								
U.S. Treasury, agencies and corporations	**—**	**334**	**—**	**334**	—	147	—	147
States and political subdivisions	**—**	**4**	**—**	**4**	—	7	—	7
Agency residential collateralized mortgage obligations	**—**	**12,783**	**—**	**12,783**	—	13,962	—	13,962
Agency residential mortgage-backed securities	**—**	**1,714**	**—**	**1,714**	—	2,105	—	2,105
Agency commercial mortgage-backed securities	**—**	**6,997**	**—**	**6,997**	—	3,187	—	3,187
Other securities	**—**	**—**	**$ 11**	**11**	—	—	$ 20	20
Total securities available for sale	**—**	**21,832**	**11**	**21,843**	—	19,408	20	19,428
Other investments:								
Principal investments:								
Direct	**—**	**—**	**1**	**1**	—	—	1	1
Indirect (measured at NAV) [(a)]	**—**	**—**	**—**	**68**	—	—	—	96
Total principal investments	**—**	**—**	**1**	**69**	—	—	1	97
Equity investments:								
Direct	**—**	**—**	**12**	**12**	—	1	7	8
Direct (measured at NAV) [(a)]	**—**	**—**	**—**	**1**	—	—	—	1
Indirect (measured at NAV) [(a)]	**—**	**—**	**—**	**8**	—	—	—	9
Total equity investments	**—**	**—**	**12**	**21**	—	1	7	18
Total other investments	**—**	**—**	**13**	**90**	—	1	8	115
Loans, net of unearned income (residential)	**—**	**—**	**4**	**4**	—	—	3	3
Loans held for sale (residential)	**—**	**140**	**—**	**140**	—	54	—	54
Derivative assets:								
Interest rate	**—**	**941**	**22**	**963**	—	410	5	415
Foreign exchange	**$ 49**	**18**	**—**	**67**	$ 70	$ 36	$ —	$ 106
Commodity	**—**	**208**	**—**	**208**	—	333	—	333
Credit	**—**	**—**	**1**	**1**	—	1	—	1
Other	**—**	**9**	**5**	**14**	—	6	3	9
Derivative assets	**49**	**1,176**	**28**	**1,253**	70	786	8	864
Netting adjustments [(b)]	**—**	**—**	**—**	**(473)**	—	—	—	(333)
Total derivative assets	**49**	**1,176**	**28**	**780**	70	786	8	531
Total assets on a recurring basis at fair value	**$ 49**	**$ 24,188**	**$ 56**	**$ 23,897**	$ 70	$ 21,098	$ 39	$ 20,980
LIABILITIES MEASURED ON A RECURRING BASIS								
Bank notes and other short-term borrowings:								
Short positions	**$ 19**	**$ 686**	**—**	**$ 705**	$ 14	$ 530	—	$ 544
Derivative liabilities:								
Interest rate	**—**	**253**	**—**	**253**	—	297	—	297
Foreign exchange	**43**	**17**	**—**	**60**	58	37	—	95
Commodity	**—**	**200**	**—**	**200**	—	323	—	323
Credit	**—**	**1**	**9**	**10**	—	1	—	1
Other	**—**	**10**	**—**	**10**	—	7	—	7
Derivative liabilities	**43**	**481**	**9**	**533**	58	665	—	723
Netting adjustments [(b)]	**—**	**—**	**—**	**(335)**	—	—	—	(337)
Total derivative liabilities	**43**	**481**	**9**	**198**	58	665	—	386

Total liabilities on a recurring basis at fair value	**$ 62**	**$ 1,167**	**9**	**$ 903**	$ 72	$ 1,195	—	$ 930

(a) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheet.

(b) Netting adjustments represent the amounts recorded to convert our derivative assets and liabilities from a gross basis to a net basis in accordance with the applicable accounting guidance. The net basis takes into account the impact of bilateral collateral and master netting agreements that allow us to settle all derivative contracts with a single counterparty on a net basis and to offset the net derivative position with the related cash collateral. Total derivative assets and liabilities include these netting adjustments.

Qualitative Disclosures of Valuation Techniques

The following table describes the valuation techniques and significant inputs used to measure the classes of assets and liabilities reported at fair value on a recurring basis, as well as the classification of each within the valuation hierarchy.

Asset/liability class	Valuation technique	Valuation hierarchy classification(s)
Securities (trading account assets and available for sale)	Fair value of level 1 securities is determined by: • Quoted market prices available in an active market for identical securities. This includes exchange-traded equity securities. Fair value of level 2 securities is determined by: • Pricing models (either by a third party pricing service or internally). Inputs include: yields, benchmark securities, bids, offers, actual trade data (i.e., spreads, credit ratings, and interest rates) for comparable assets, spread tables, matrices, high-grade scales, and option-adjusted spreads. • Observable market prices of similar securities. Fair value of level 3 securities is determined by: • Internal models, principally discounted cash flow models (income approach). • Revenue multiples of comparable public companies (market approach). For level 3 securities, increases in the discount rate applied in the discounted cash flow models would negatively affect the fair value. Increases in valuation multiples of comparable companies would positively affect the fair value. The valuations provided by the third-party pricing service are based on observable market inputs, which include benchmark yields, reported trades, issuer spreads, benchmark securities, bids, offers, and reference data obtained from market research publications. Inputs used by the third-party pricing service in valuing CMOs and other mortgage-backed securities also include new issue data, monthly payment information, whole loan collateral performance, and "To Be Announced" prices. In valuations of securities issued by state and political subdivisions, inputs used by the third-party pricing service also include material event notices.	Level 1, 2, and 3 (primarily Level 2)
Commercial loans (trading account assets)	Fair value is based on: • Observable market price spreads for similar loans. Valuations reflect prices within the bid-ask spread that are most representative of fair value.	Level 2
Principal investments (direct)	Direct principal investments consist of equity and debt instruments of private companies made by our principal investing entities. Fair value is determined using: • Operating performance and market multiples of comparable businesses • Other unique facts and circumstances related to each individual investment Direct principal investments are accounted for as investment companies in accordance with the applicable accounting guidance, whereby each investment is adjusted to fair value with any net realized or unrealized gain/loss recorded in the current period's earnings. We are in the process of winding down our direct principal investment portfolio. As of December 31, 2019, the balance is less than $1 million.	Level 3
Principal investments (indirect)	Indirect principal investments include primary and secondary investments in private equity funds engaged mainly in venture- and growth-oriented investing. These investments do not have readily determinable fair values and qualify for the practical expedient to estimate fair value based upon net asset value per share (or its equivalent, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed). Indirect principal investments are also accounted for as investment companies, whereby each investment is adjusted to fair value with any net realized or unrealized gain/loss recorded in the current period's earnings. Under the provisions of the Volcker Rule, we are required to dispose or conform our indirect investments to the requirements of the statute by no later than July 21, 2022. As of December 31, 2019, we have not committed to a plan to sell these investments. Therefore, these investments continue to be valued using the net asset value per share methodology.	NAV

The following table presents the fair value of our direct and indirect principal investments and related unfunded commitments at December 31, 2019, as well as financial support provided for the years ended December 31, 2019, and December 31, 2018.

in millions	December 31, 2019 Fair Value	December 31, 2019 Unfunded Commitments	Financial support provided, Year ended December 31, 2019 Funded Commitments	2019 Funded Other	2018 Funded Commitments	2018 Funded Other
INVESTMENT TYPE						
Direct investments [(a)]	$ 1	—	—	1	—	$ —
Indirect investments [(b)]	68	$ 21	$ —	—	$ 1	—
Total	$ 69	$ 21	$ —	1	$ 1	$ —

(a) Our direct investments consist of equity and debt investments directly in independent business enterprises. Operations of the business enterprises are handled by management of the portfolio company. The purpose of funding these enterprises is to provide financial support for business development and acquisition strategies. We infuse equity capital based on an initial contractual cash contribution and later from additional requests on behalf of the companies' management.

(b) Our indirect investments consist of buyout funds, venture capital funds, and fund of funds. These investments are generally not redeemable. Instead, distributions are received through the liquidation of the underlying investments of the fund. An investment in any one of these funds typically can be sold only with the approval of the fund's general partners. At December 31, 2019, no significant liquidation of the underlying investments has been communicated to Key. The purpose of funding our capital commitments to these investments is to allow the funds to make additional follow-on investments and pay fund expenses until the fund dissolves. We, and all other investors in the fund, are obligated to fund the full amount of our respective capital commitments to the fund based on our and their respective ownership percentages, as noted in the applicable Limited Partnership Agreement.

Asset/liability class	Valuation technique	Valuation hierarchy classification(s)
Other direct equity investments	Fair value is determined using: • Discounted cash flows • Operating performance and market/exit multiples of comparable businesses • Other unique facts and circumstances related to each individual investment For level 3 securities, increases in the discount rate applied in the discounted cash flow models would negatively affect the fair value. Increases in valuation multiples of comparable companies would positively affect the fair value. Level 2 investments reflect the price of recent investments, which is deemed representative of fair value.	Level 2 and 3
Other direct and indirect equity investments (NAV)	Certain direct investments do not have readily determinable fair values and qualify for the practical expedient in the accounting guidance that allows us to estimate fair value based upon net asset value per share.	NAV
Loans held for sale and held for investment (residential)	Residential mortgage loans held for sale are accounted for at fair value. Fair values are based on: • Quoted market prices, where available • Prices for other traded mortgage loans with similar characteristics • Purchase commitments and bid information received from market participants Prices are adjusted as necessary to include: • The embedded servicing value in the loans • The specific characteristics of certain loans that are priced based on the pricing of similar loans. (These adjustments represent unobservable inputs to the valuation but are not considered significant given the relative insensitivity of the value to changes in these inputs to the fair value of the loans.) Residential loans held for investment: Certain residential loans held for sale contain salability exceptions that make them unable to be sold into the performing loan sales market. Loans in this category are transferred to the held to maturity loan portfolio and are included in "Loans, net of unearned income" on the balance sheet. This type of loan is classified as level 3 in the valuation hierarchy as transaction details regarding sales of this type of loan are often unavailable. Fair value is based upon: • Unobservable bid information from brokers and investors	Level 1, 2 and 3 (primarily level 2)
Derivatives	Exchange-traded derivatives are valued using quoted prices in active markets and, therefore, are classified as Level 1 instruments. The majority of our derivative positions are level 2 and are valued using internally developed models based on market convention and observable market inputs. These derivative contracts include interest rate swaps, certain options, floors, cross currency swaps, credit default swaps, and forward mortgage loan sale commitments. Significant inputs used in the valuation models include: • Interest rate curves • Yield curves	Level 1, 2, and 3 (primarily level 2)

	• LIBOR and Overnight Index Swap (OIS) discount rates • LIBOR and OIS curves, index pricing curves, foreign currency curves • Volatility surfaces (a three-dimensional graph of implied volatility against strike price and maturity) • Current prices for mortgage securities and investor supplied prices	

Asset/liability class	Valuation technique	Valuation hierarchy classification(s)
Derivatives (continued)	We have several customized derivative instruments and risk participations that are classified as Level 3 instruments. These derivative positions are valued using internally developed models, with inputs consisting of available market data, such as: • Bond spreads and asset values The unobservable internally derived assumptions include: • Loss given default • Internal risk ratings of customers and the remaining term of the underlying transactions The fair value represents an estimate of the amount that the risk participation counterparty would need to pay/receive as of the measurement date based on the probability of customer default on the swap transaction and the fair value of the underlying customer swap. Therefore, a higher loss probability and a lower credit rating would negatively affect the fair value of the risk participations and a lower loss probability and higher credit rating would positively affect the fair value of the risk participations. We use interest rate lock commitments for our residential mortgage business, which are classified as Level 3 instruments. The significant components of the valuation model include: • Interest rates observable in the market • Observable market prices for similar securities • The probability of the loan closing (i.e. the "pull-through" amount, a significant unobservable input). Increases in the probability of the loan closing would positively affect the fair value. Valuation of residential mortgage forward sale commitments utilizes observable market prices of comparable commitments and mortgage securities (Level 2).	Level 1, 2, and 3 (primarily level 2)
Liability for short positions	This includes fixed income securities held by our broker dealer in its trading inventory. Fair value of level 1 securities is determined by: • Quoted market prices available in an active market for identical securities Fair value of level 2 securities is determined by: • Observable market prices of similar securities • Market activity, spreads, credit ratings and interest rates for each security type	Level 1 and 2

Market convention implies a credit rating of “AA” equivalent in the pricing of derivative contracts, which assumes all counterparties have the same creditworthiness. To reflect the actual exposure on our derivative contracts related to both counterparty and our own creditworthiness, we record a fair value adjustment. The credit component considers master netting and collateral agreements and is determined by the individual counterparty based on potential future exposures, expected recovery rates, and market-implied probabilities of default.

We also make liquidity valuation adjustments to the fair value of certain assets to reflect the uncertainty in the pricing and trading of the instruments when we are unable to observe recent market transactions for identical or similar instruments. Liquidity valuation adjustments are based on the following factors:

- the amount of time since the last relevant valuation;
- whether there is an actual trade or relevant external quote available at the measurement date; and
- volatility associated with the primary pricing components.

We regularly validate the pricing methodologies of valuations derived from a third-party pricing service to ensure the fair value determination is consistent with the applicable accounting guidance and that our assets are properly classified in the fair value hierarchy. To perform this validation, we:

- review documentation received from our third-party pricing service regarding the inputs used in its valuations and determine a level assessment for each category of securities;
- substantiate actual inputs used for a sample of securities by comparing the actual inputs used by our third-party pricing service to comparable inputs for similar securities; and
- substantiate the fair values determined for a sample of securities by comparing the fair values provided by our third-party pricing

service to prices from other independent sources for the same and similar securities. We analyze variances and conduct additional research with our third-party pricing service and take appropriate steps based on our findings.

Changes in Level 3 Fair Value Measurements

The following table shows the change in the fair values of our Level 3 financial instruments for the years ended December 31, 2019, and December 31, 2018.

in millions	Beginning of Period Balance	Gains (Losses) included in comprehensive income	Gains (Losses) Included in Earnings	Purchases	Sales	Settlements	Transfers Other	Transfers into Level 3	Transfers out of Level 3	End of Period Balance	Unrealized Gains (Losses) Included in Earnings
Year ended December 31, 2019											
Securities available for sale											
Other securities	**$ 20**	**$ 15**	**—**	**—**	**—**	**—**	**—**	**—**	**$ (24)**	**$ 11**	**—**
Other investments											
Principal investments											
Direct	**1**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**1**	**—**
Equity investments											
Direct	**7**	**—**	**$ 4** (c)	**—**	**—**	**—**	**—**	**$ 1**	**—**	**12**	**4**
Loans held for sale	**—**	**—**	**—**	**—**	**$ (1)**	**—**	**$ 1**	**—**	**—**	**—**	**—**
Loans held for investment	**3**	**—**	**—**	**—**	**—**	**—**	**1**	**—**	**—**	**4**	**—**
Derivative instruments (b)											
Interest rate	**5**	**—**	**3** (d)	**$ 2**	**(1)**	**—**	**—**	**21** (e)	**(8)** (e)	**22**	**—**
Credit	**—**	**—**	**(8)** (d)	**—**	**—**	**—**	**—**	**—**	**—**	**(8)**	**—**
Other (a)	**3**	**—**	**—**	**—**	**—**	**—**	**2**	**—**	**—**	**5**	**—**

in millions	Beginning of Period Balance	Gains (Losses) included in comprehensive income	Gains (Losses) Included in Earnings	Purchases	Sales	Settlements	Transfers Other	Transfers into Level 3	Transfers out of Level 3	End of Period Balance	Unrealized Gains (Losses) Included in Earnings
Year ended December 31, 2018											
Securities available for sale											
Other securities	$ 20	—	—	—	—	—	—	—	—	$ 20	—
Other investments											
Principal investments											
Direct	13	—	$ (1) (c)	$ 5	$ (16)	—	—	—	—	1	—
Equity investments											
Direct	3	—	—	—	—	—	—	$ 4	—	7	—
Loans held for sale	1	—	—	—	(1)	—	$ (1)	1	—	—	—
Loans held for investment	2	—	—	—	—	—	1	—	—	3	—
Derivative instruments (b)											
Interest rate	9	—	(2) (d)	1	(2)	—	—	7 (e)	$ (8) (e)	5	—
Credit	1	—	(31) (d)	—	—	$ 30	—	—	—	—	—
Other (a)	3	—	—	—	—	—	$ —	—	—	3	—

(a) Amounts represent Level 3 interest rate lock commitments.
(b) Amounts represent Level 3 derivative assets less Level 3 derivative liabilities.
(c) Realized and unrealized gains and losses on principal investments are reported in “other income” on the income statement. Realized and unrealized losses on equity investments are reported in “other income” on the income statement.
(d) Realized and unrealized gains and losses on derivative instruments are reported in “corporate services income” and “other income” on the income statement.
(e) Certain derivatives previously classified as Level 2 were transferred to Level 3 because Level 3 unobservable inputs became significant. Certain derivatives previously classified as Level 3 were transferred to Level 2 because Level 3 unobservable inputs became less significant.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Certain assets and liabilities are measured at fair value on a nonrecurring basis in accordance with GAAP. The adjustments to fair value generally result from the application of accounting guidance that requires assets and liabilities to be recorded at the lower of cost or fair value, or assessed for impairment. There were no liabilities measured at fair value on a nonrecurring basis at December 31, 2019, and December 31, 2018. The following table presents our assets measured at fair value on a nonrecurring basis at December 31, 2019, and December 31, 2018:

	December 31, 2019				December 31, 2018			
in millions	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total

ASSETS MEASURED ON A NONRECURRING BASIS								
Impaired loans and leases	**—**	**—**	**$ 76**	**$ 76**	—	—	$ 42	$ 42
Accrued income and other assets	**—**	**$ 118**	**51**	**169**	—	—	16	16
Total assets on a nonrecurring basis at fair value	**—**	**$ 118**	**$ 127**	**$ 245**	—	—	$ 58	$ 58

Qualitative Disclosures of Valuation Techniques

The following table describes the valuation techniques and significant inputs used to measure the significant classes of assets and liabilities reported at fair value on a nonrecurring basis, as well as the classification of each within the valuation hierarchy.

Asset/liability class	Valuation technique	Valuation hierarchy classification (s)
Impaired loans and leases	Loans are evaluated for impairment on a quarterly basis; impairment typically occurs when there is evidence of a probable loss and the expected value of the loan is less than the contractual value of the loan. The amount of the impairment may be determined based on the estimated present value of future cash flows, the fair value of the underlying collateral, or the loan's observable market price based on recent sales of similar loans and collateral. Cash flow analysis considers internally developed inputs including: • Discount rates • Default rates • Costs of foreclosure • Changes in collateral values The fair value of the underlying collateral, which may take the form of real estate or personal property, is based on internal estimates, field observations, and assessments provided by third-party appraisers. We perform or reaffirm appraisals of collateral-dependent impaired loans at least annually. Appraisals may occur more frequently if the most recent appraisal does not accurately reflect the current market, the debtor is seriously delinquent or chronically past due, or there has been a material deterioration in the performance of the project or condition of the property. Adjustments to outdated appraisals that result in an appraisal value less than the carrying amount of a collateral-dependent impaired loan are reflected in the ALLL. Impaired loans with a specifically allocated allowance based on a cash flow analysis or the value of the underlying collateral are classified as Level 3 assets. Impaired loans with a specifically allocated allowance based on an observable market price that reflects recent sale transactions for similar loans and collateral are classified as Level 2 assets. We adjust the carrying amount of our impaired loans when there is evidence of probable loss and the expected fair value of the loan is less than its contractual amount.	Level 2 and 3
Commercial loans held for sale	Through a quarterly analysis of our loan portfolios held for sale, which include both performing and nonperforming commercial loans, we determine any adjustments necessary to record the portfolios at the lower of cost or fair value in accordance with GAAP. Valuation inputs include: • Non-binding bids for the respective loans or similar loans • Recent sales transactions • Internal models that emulate recent securitizations	Level 2 and 3
Direct financing leases and operating lease assets held for sale	Valuations of direct financing leases and operating lease assets held for sale are performed using an internal model that relies on market data, including: • Swap rates and bond ratings • Our own assumptions about the exit market for the leases • Details about the individual leases in the portfolio KEF has master sale and assignment agreements with numerous institutional investors. Historically, multiple quotes are obtained, with the most reasonable formal quotes retained. These nonbinding quotes generally lead to a sale to one of the parties who provided the quote. Leases for which we receive a current nonbinding bid, and for which the sale is considered probable, may be classified as Level 2. The validity of these quotes is supported by historical and continued dealings with institutions that have fulfilled the nonbinding quote in the past. Valuations of lease and operating lease assets held for sale that employ our own assumptions are classified as Level 3 assets. Inputs utilized include changes in the value of leased items and internal credit ratings. In an inactive market, we value assets held for sale through discounted cash flows models that utilize the current buy rate as the discount rate. Buy rates are based on the credit premium inherent in the relevant bond index and the the appropriate swap rate on the measurement date.	Level 2 and 3

Asset/liability class	Valuation technique	Valuation hierarchy classification(s)
OREO and other repossessed personal property[(a)]	OREO and other repossessed properties are valued based on: • Appraisals and third-party price opinions, less estimated selling costs Generally, we classify these assets as Level 3, but OREO and other repossessed properties for which we receive binding purchase agreements are classified as Level 2. Returned lease inventory is valued based on market data for similar assets and is classified as Level 2. Assets that are acquired through, or in lieu of, loan foreclosures are recorded initially as held for sale at fair value less estimated selling costs at the date of foreclosure. After foreclosure, valuations are updated periodically, and current market conditions may require the assets to be marked down further to a new cost basis.	Level 2 and 3
LIHTC, HTC, and NMTC investments[(a)]	LIHTC, HTC and NMTC operating partnerships are subject to quarterly impairment testing. This evaluation involves measuring the present value of future tax benefits and comparing that value against the current carrying value of the investment. Expected future tax benefit schedules are provided by the partnerships' general partners on a quarterly basis. These future benefits are discounted to their present value using discounted cash flow modeling that incorporates an appropriate risk premium. LIHTC and HTC investments are impaired when it is more likely than not that the carrying amount of the investment will not be realized.	Level 3
Other equity investments	We have other investments in equity securities that do not have readily determinable fair values and do not qualify for the practical expedient to measure the investment using a net asset value per share. We have elected to measure these securities at cost less impairment plus or minus adjustments due to observable orderly transactions. Impairment is recorded when there is evidence that the expected fair value of the investment has declined to below the recorded cost. At each reporting period, we assess if these investments continue to qualify for this measurement alternative. At December 31, 2019, the carrying amount of equity investments recorded under this method was $134 million. Impairments of less than $1 million were recorded for the year ended December 31, 2019.	Level 3
Mortgage Servicing Rights[(a)]	Refer to Note 9. Mortgage Servicing Assets	Level 3

(a) Asset classes included in "Accrued income and other assets" on the Consolidated Balance Sheets

Quantitative Information about Level 3 Fair Value Measurements

The range and weighted-average of the significant unobservable inputs used to fair value our material Level 3 recurring and nonrecurring assets at December 31, 2019, and December 31, 2018, along with the valuation techniques used, are shown in the following table:

December 31, 2019 *dollars in millions*	Level 3 Asset (Liability)	Valuation Technique	Significant Unobservable Input	Range (Weighted-Average) (b), (c)
Recurring				
Securities available-for-sale:				
Other securities	**$ 11**	Discounted cash flows	Discount rate	N/A (16.10%)
			Marketability discount	N/A (30.00%)
			Volatility factor	N/A (43.00%)
Other investments: (a)				
Equity investments				
Direct	**12**	Discounted cash flows	Discount rate	13.91 - 17.24% (15.61%)
			Marketability discount	N/A (30.00%)
			Volatility factor	N/A (47.00%)
Loans, net of unearned income (residential)	**4**	Market comparable pricing	Comparability factor	79.00 - 98.00% (91.05%)
Derivative instruments:				
Interest rate	**22**	Discounted cash flows	Probability of default	.02 - 100% (5.40%)
			Internal risk rating	1 - 19 (9.168)
			Loss given default	0 - 1 (.492)
Credit (assets)	**1**	Discounted cash flows	Probability of default	.02 - 100% (4.2%)
			Internal risk rating	1 - 19 (10.13)
			Loss given default	0 - 1 (.498)
Credit (liabilities)	**(9)**	Discounted cash flows	Probability of default	.02 - 100% (12.24%)
			Internal risk rating	1 - 19 (8.058)
			Loss given default	0 - 1 (.411)
Other (d)	**5**	Discounted cash flows	Loan closing rates	37.71 - 99.69% (79.33%)
Nonrecurring				
Impaired loans	**76**	Fair value of underlying collateral	Discount rate	0 - 60.00% (10.00%)
Accrued income and other assets: (e)				
OREO	**5**	Appraised value	Appraised value	N/M

December 31, 2018 *dollars in millions*	Fair Value of Level 3 Assets	Valuation Technique	Significant Unobservable Input	Range (Weighted-Average)
Nonrecurring				
Impaired loans	$ 42	Fair value of underlying collateral	Discount	20.00 - 40.00% (21.00%)

(a) Principal investments, direct is excluded from this table as the balance at December 31, 2019, is insignificant (less than $1 million).
(b) The weighted average of significant unobservable inputs is calculated using a weighting relative to fair value.
(c) For significant unobservable inputs with no range, a single figure is reported to denote the single quantitative factor used.
(d) Amounts represent interest rate lock commitments.
(e) Excludes $46 million pertaining to mortgage servicing assets measured at fair value as of December 31, 2019. Refer to Note 8 (“Mortgage Servicing Assets”) for significant unobservable inputs pertaining to these assets.

Fair Value Disclosures of Financial Instruments

The levels in the fair value hierarchy ascribed to our financial instruments and the related carrying amounts at December 31, 2019, and December 31, 2018, are shown in the following table.

	December 31, 2019						
		Fair Value					
in millions	Carrying Amount	Level 1	Level 2	Level 3	Measured at NAV	Netting Adjustment	Total
ASSETS (by measurement category)							
Fair value - net income							
Trading account assets [b]	$ 1,040	—	$ 1,040	—	—	—	$ 1,040
Other investments [b]	605	—	—	$ 528	$ 77	—	605
Loans, net of unearned income (residential) [d]	4	—	—	4	—	—	4
Loans held for sale (residential) [b]	140	—	140	—	—	—	140
Derivative assets - trading [b]	715	$ 49	985	28	—	$ (347) [f]	715
Fair value - OCI							
Securities available for sale [b]	21,843	—	21,832	11	—	—	21,843
Derivative assets - hedging [b] [g]	65	—	191	—	—	(126) [f]	65
Amortized cost							
Held-to-maturity securities [c]	10,067	—	10,116	—	—	—	10,116
Loans, net of unearned income [d]	93,742	—	—	92,641	—	—	92,641
Loans held for sale [b]	1,194	—	—	1,194	—	—	1,194
Other							
Cash and short-term investments [a]	2,004	2,004	—	—	—	—	2,004
LIABILITIES (by measurement category)							
Fair value - net income							
Derivative liabilities - trading [b]	194	43	461	9	—	(319) [f]	194
Fair value - OCI							
Derivative liabilities - hedging [b] [g]	4	—	20	—	—	(16) [f]	4
Amortized cost							
Time deposits [e]	11,652	—	11,752	—	—	—	11,752
Short-term borrowings [a]	1,092	19	1,073	—	—	—	1,092
Long-term debt [e]	12,448	12,694	249	—	—	—	12,943
Other							
Deposits with no stated maturity [a]	100,218	—	100,218	—	—	—	100,218

	December 31, 2018						
		Fair Value					
in millions	Carrying Amount	Level 1	Level 2	Level 3	Measured at NAV	Netting Adjustment	Total
ASSETS (by measurement category)							
Fair value - net income							
Trading account assets [b]	$ 849	—	$ 849	—	—	—	$ 849
Other investments [b]	666	—	1	$ 559	$ 106	—	666
Loans, net of unearned income (residential) [d]	3	—	—	3	—	—	3
Loans held for sale (residential) [b]	54	—	54	—	—	—	54
Derivative assets - trading [b]	462	$ 68	736	8	—	$ (350) [f]	462
Fair value - OCI							
Securities available for sale [b]	19,428	—	19,408	20	—	—	19,428
Derivative assets - hedging [b] [g]	69	2	50	—	—	17 [f]	69
Amortized cost							
Held-to-maturity securities [c]	11,519	—	11,122	—	—	—	11,122
Loans, net of unearned income [d]	88,666	—	—	86,224	—	—	86,224
Loans held for sale [b]	1,173	—	—	1,173	—	—	1,173
Other							
Cash and short-term investments [a]	3,240	3,240	—	—	—	—	3,240
LIABILITIES (by measurement category)							
Fair value - net income							
Derivative liabilities - trading [b]	395	58	675	—	—	(338) [f]	395
Fair value - OCI							
Derivative liabilities - hedging [b] [g]	(9)	—	(10)	—	—	1 [f]	(9)
Amortized cost							
Time deposits [e]	13,245	—	13,331	—	—	—	13,331

Short-term borrowings [a]	863	14	849	—	—	—	863
Long-term debt [e]	13,732	12,576 $	1,211	—	—	—	13,787
Other							
Deposits with no stated maturity [a]	94,064	—	94,064	—	—	—	94,064

Valuation Methods and Assumptions

(a) Fair value equals or approximates carrying amount. The fair value of deposits with no stated maturity does not take into consideration the value ascribed to core deposit intangibles.

(b) Information pertaining to our methodology for measuring the fair values of these assets and liabilities is included in the sections entitled “Qualitative Disclosures of Valuation Techniques” and “Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis” in this Note. Investments accounted for under the cost method (or cost less impairment adjusted for observable price changes for certain equity investments) are classified as Level 3 assets. These investments are not actively traded in an open market as sales for these types of investments are rare. The carrying amount of the investments carried at cost are adjusted for declines in value if they are considered to be other-than-temporary (or due to observable orderly transactions of the same issuer for equity investments eligible for the cost less impairment measurement alternative). These adjustments are included in “other income” on the income statement.

(c) Fair values of held-to-maturity securities are determined by using models that are based on security-specific details, as well as relevant industry and economic factors. The most significant of these inputs are quoted market prices, interest rate spreads on relevant benchmark securities, and certain prepayment assumptions. We review the valuations derived from the models to ensure that they are reasonable and consistent with the values placed on similar securities traded in the secondary markets.

(d) The fair value of loans is based on the present value of the expected cash flows. The projected cash flows are based on the contractual terms of the loans, adjusted for prepayments and use of a discount rate based on the relative risk of the cash flows, taking into account the loan type, maturity of the loan, liquidity risk, servicing costs, and a required return on debt and capital. In addition, an incremental liquidity discount is applied to certain loans, using historical sales of loans during periods of similar economic conditions as a benchmark. The fair value of loans includes lease financing receivables at their aggregate carrying amount, which is equivalent to their fair value.

(e) Fair values of time deposits and long-term debt are based on discounted cash flows utilizing relevant market inputs.

(f) Netting adjustments represent the amounts recorded to convert our derivative assets and liabilities from a gross basis to a net basis in accordance with the applicable accounting guidance. The net basis takes into account the impact of bilateral collateral and master netting agreements that allow us to settle all derivative contracts with a single counterparty on a net basis and to offset the net derivative position with the related cash collateral. Total derivative assets and liabilities include these netting adjustments.

(g) Derivative assets-hedging and derivative liabilities-hedging includes both cash flow and fair value hedges. Additional information regarding our accounting policies for cash flow and fair value hedges is provided in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Derivatives and Hedging.”

We determine fair value based on assumptions pertaining to the factors that a market participant would consider in valuing the asset. A substantial portion of our fair value adjustments are related to liquidity. During 2018 and 2019, the fair values of our loan portfolios generally remained stable, primarily due to sustained liquidity in the loan markets. If we were to use different assumptions, the fair values shown in the preceding table could change. Also, because the applicable accounting guidance for financial instruments excludes certain financial instruments and all nonfinancial instruments from its disclosure requirements, the fair value amounts shown in the table above do not, by themselves, represent the underlying value of our company as a whole.

Discontinued assets - education lending business. Our discontinued assets include government-guaranteed and private education loans originated through our education lending business that was discontinued in September 2009. This portfolio consists of loans recorded at carrying value with appropriate valuation reserves and loans in portfolio recorded at fair value. All of these loans were excluded from the table above as follows:

- Loans at carrying value, net of allowance, of $855 million ($729 million at fair value) at December 31, 2019, and $1.1 billion ($890 million at fair value) at December 31, 2018; and
- Portfolio loans at fair value of $2 million at December 31, 2019, and $2 million at December 31, 2018.

These loans and securities are classified as Level 3 because we rely on unobservable inputs when determining fair value since observable market data is not available.

Short-term financial instruments. For financial instruments with a remaining average life to maturity of less than six months, carrying amounts were used as an approximation of fair values.

7. Securities

The amortized cost, unrealized gains and losses, and approximate fair value of our securities available for sale and held-to-maturity securities are presented in the following tables. Gross unrealized gains and losses represent the difference between the amortized cost and the fair value of securities on the balance sheet as of the dates indicated. Accordingly, the amount of these gains and losses may change in the future as market conditions change.

December 31, *in millions*	2019 Amortized Cost	2019 Gross Unrealized Gains	2019 Gross Unrealized Losses	2019 Fair Value	2018 Amortized Cost	2018 Gross Unrealized Gains	2018 Gross Unrealized Losses	2018 Fair Value
SECURITIES AVAILABLE FOR SALE								
U.S. Treasury, Agencies, and Corporations	**$ 334**	**—**	**—**	**$ 334**	$ 150	—	$ 3	$ 147
States and political subdivisions	**4**	**—**	**—**	**4**	7	—	—	7
Agency residential collateralized mortgage obligations	**12,772**	**$ 82**	**$ 71**	**12,783**	14,315	$ 20	373	13,962
Agency residential mortgage-backed securities	**1,677**	**41**	**4**	**1,714**	2,128	13	36	2,105
Agency commercial mortgage-backed securities	**6,898**	**139**	**40**	**6,997**	3,300	19	132	3,187
Other securities	**7**	**4**	**—**	**11**	17	3	—	20
Total securities available for sale	**$ 21,692**	**$ 266**	**$ 115**	**$ 21,843**	$ 19,917	$ 55	$ 544	$ 19,428
HELD-TO-MATURITY SECURITIES								
Agency residential collateralized mortgage obligations	**$ 5,692**	**$ 23**	**$ 49**	**$ 5,666**	$ 7,021	$ 2	$ 254	$ 6,769
Agency residential mortgage-backed securities	**409**	**6**	**—**	**415**	490	—	14	476
Agency commercial mortgage-backed securities	**3,940**	**78**	**9**	**4,009**	3,996	2	133	3,865
Asset-backed securities	**11**	**—**	**—**	**11**	—	—	—	—
Other securities	**15**	**—**	**—**	**15**	12	—	—	12
Total held-to-maturity securities	**$ 10,067**	**$ 107**	**$ 58**	**$ 10,116**	$ 11,519	$ 4	$ 401	$ 11,122

The following table summarizes our securities that were in an unrealized loss position as of December 31, 2019, and December 31, 2018:

	Duration of Unrealized Loss Position					
	Less than 12 Months		12 Months or Longer		Total	
in millions	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
December 31, 2019						
Securities available for sale:						
U.S. Treasury, Agencies, and Corporations	**$ 30**	**—** (a)	**$ 30**	**—** (a)	**$ 60**	**—**
Agency residential collateralized mortgage obligations	**3,432**	**$ 20**	**3,221**	**$ 51**	**6,653**	**$ 71**
Agency residential mortgage-backed securities	**33**	**—** (a)	**629**	**4**	**662**	**4**
Agency commercial mortgage-backed securities	**1,541**	**17**	**1,213**	**23**	**2,754**	**40**
Held-to-maturity securities:						
Agency residential collateralized mortgage obligations	**1,626**	**14**	**2,289**	**35**	**3,915**	**49**
Agency residential mortgage-backed securities	**56**	**—** (a)	**—**	**—**	**56**	**—**
Agency commercial mortgage-backed securities	**518**	**9**	**—**	**—**	**518**	**9**
Asset-backed securities	**11**	**—** (a)	**—**	**—**	**11**	**—**
Other securities	**3**	**—** (a)	**—**	**—**	**3**	**—**
Total temporarily impaired securities	**$ 7,250**	**$ 60**	**$ 7,382**	**$ 113**	**$ 14,632**	**$ 173**
December 31, 2018						
Securities available for sale:						
U.S. Treasury, Agencies, and Corporations	—	—	$ 147	$ 3	$ 147	$ 3
Agency residential collateralized mortgage obligations	$ 570	$ 2	10,945	371	11,515	373
Agency residential mortgage-backed securities	4	— (b)	1,087	36	1,091	36
Agency commercial mortgage-backed securities	—	—	1,729	132	1,729	132
Held-to-maturity securities:						
Agency residential collateralized mortgage obligations	—	—	6,416	254	6,416	254
Agency residential mortgage-backed securities	—	—	475	14	475	14
Agency commercial mortgage-backed securities	73	— (b)	3,359	133	3,432	133
Total temporarily impaired securities	$ 647	$ 2	$ 24,158	$ 943	$ 24,805	$ 945

(a) At December 31, 2019, gross unrealized losses totaled less than $1 million for U.S. Treasury, Agencies, and Corporations and agency residential mortgage-backed securities available for sale with a loss duration of less than 12 months and less than $1 million for agency residential mortgage-backed securities, asset-backed securities, and other securities held-to-maturity with a loss duration of less than 12 months. At December 31, 2019, gross unrealized losses totaled less than $1 million for U.S. Treasury, Agencies, and Corporations securities available for sale with a loss duration greater than 12 months or longer.

(b) At December 31, 2018, gross unrealized losses totaled less than $1 million for agency residential mortgage-backed securities available for sale with a loss duration of less than 12 months and less than $1 million for agency commercial mortgage-backed securities held-to-maturity with a loss duration of less than 12 months.

At December 31, 2019, we had $71 million of gross unrealized losses related to 240 fixed-rate agency residential CMOs that we invested in as part of our overall A/LM strategy. These securities had a weighted-average maturity of 3.79 years at December 31, 2019. At December 31, 2019, we also had $4 million of gross unrealized losses related to 186 agency residential mortgage-backed securities positions and $40 million of gross unrealized losses related to 27 agency commercial mortgage-backed securities positions with weighted-average maturities of 3.59 and 4.25 years, respectively, at December 31, 2019. Because these securities have a fixed interest rate, their fair value is sensitive to movements in market interest rates. These unrealized losses are considered temporary since we expect to collect all contractually due amounts from these securities. Accordingly, these investments were reduced to their fair value through OCI, not earnings.

We regularly assess our securities portfolio for OTTI. The assessments are based on the nature of the securities, the underlying collateral, the financial condition of the issuer, the extent and duration of the loss, our intent related to the individual securities, and the likelihood that we will have to sell securities prior to expected recovery. We did not have any impairment losses recognized in earnings for the year ended December 31, 2019.

Realized gains and losses related to securities available for sale were as follows:

Year ended December 31, *in millions*	**2019** [(a)]	**2018** [(b)]	**2017** [(a)]
Realized gains	**$ 20**	—	$ 1
Realized losses	**—**	—	—
Net securities gains (losses)	**$ 20**	—	$ 1

(a) Realized losses totaled less than $1 million for the year ended December 31, 2019, and December 31, 2017.
(b) Realized gains and losses totaled less than $1 million for the year ended December 31, 2018.

At December 31, 2019, securities available-for-sale and held-to-maturity securities totaling $8.0 billion were pledged to secure securities sold under repurchase agreements, to secure public and trust deposits, to facilitate access to secured funding, and for other purposes required or permitted by law.

The following table shows securities by remaining maturity. CMOs and other mortgage-backed securities in the available-for-sale and held-to-maturity portfolios are presented based on their expected average lives. The remaining securities, in both the available-for-sale and held-to-maturity portfolios, are presented based on their remaining contractual maturity. Actual maturities may differ from expected or contractual maturities since borrowers have the right to prepay obligations with or without prepayment penalties.

December 31, 2019	**Securities Available for Sale**		**Held-to-Maturity Securities**	
in millions	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**
Due in one year or less	$ 490	$ 494	$ 66	$ 66
Due after one through five years	17,438	17,486	7,173	7,178
Due after five through ten years	3,756	3,856	2,828	2,872
Due after ten years	8	7	—	—
Total	$ 21,692	$ 21,843	$ 10,067	$ 10,116

8. Derivatives and Hedging Activities

We are a party to various derivative instruments, mainly through our subsidiary, KeyBank. The primary derivatives that we use are interest rate swaps, caps, floors, forwards and futures; foreign exchange contracts; commodity derivatives; and credit derivatives. These instruments help us manage exposure to interest rate risk, mitigate the credit risk inherent in our loan portfolio, hedge against changes in foreign currency exchange rates, and meet client financing and hedging needs. As further discussed in this note:

- interest rate risk is the risk that the EVE or net interest income will be adversely affected by fluctuations in interest rates;
- credit risk is the risk of loss arising from an obligor's inability or failure to meet contractual payment or performance terms; and
- foreign exchange risk is the risk that an exchange rate will adversely affect the fair value of a financial instrument.

At December 31, 2019, after taking into account the effects of bilateral collateral and master netting agreements, we had $65 million of derivative assets and $4 million of derivative liabilities that relate to contracts entered into for hedging purposes. As of the same date, after taking into account the effects of bilateral collateral and master netting agreements and a reserve for potential future losses, we had derivative assets of $715 million and derivative liabilities of $194 million that were not designated as hedging instruments. These positions are primarily comprised of derivative contracts entered into for client accommodation purposes.

Additional information regarding our accounting policies for derivatives is provided in Note 1 ("Summary of Significant Accounting Policies") under the heading "Derivatives and Hedging."

Derivatives Designated in Hedge Relationships

Net interest income and the EVE change in response to changes in the mix of assets, liabilities, and off-balance sheet instruments and the associated interest rates tied to each instrument. In addition, differences in the repricing and maturity characteristics of interest-earning assets and interest-bearing liabilities cause net interest income and the EVE to fluctuate. We utilize derivatives that have been designated as part of a hedge relationship in accordance with the applicable accounting guidance to manage net interest income and EVE to within our stated risk tolerances. The primary derivative instruments used to manage interest rate risk are interest rate swaps.

We designate certain "receive fixed/pay variable" interest rate swaps as fair value hedges. These contracts convert certain fixed-rate long-term debt into variable-rate obligations, thereby modifying our exposure to changes in interest rates. As a result, we receive fixed-rate interest payments in exchange for making variable-rate payments over the lives of the contracts without exchanging the notional amounts.

Similarly, we designate certain "receive fixed/pay variable" interest rate swaps as cash flow hedges. These contracts effectively convert certain floating-rate loans into fixed-rate loans to reduce the potential adverse effect of interest rate decreases on future interest income. Again, we receive fixed-rate interest payments in exchange for making variable-rate payments over the lives of the contracts without exchanging the notional amounts.

We designate interest rate floors as cash flow hedges. Interest rate floors also reduce the potential adverse effect of interest rate decreases on future interest income. We receive interest payments when the strike price specified in the contracts falls below a reference rate in exchange for an upfront premium.

We designate certain "pay fixed/receive variable" interest rate swaps as cash flow hedges. These swaps convert certain floating-rate debt into fixed-rate debt. We also use these swaps to manage the interest rate risk associated with anticipated sales of certain commercial real estate loans and certain student loans originated through our Laurel Road digital lending business. The swaps protect against the possible short-term decline in the value of the loans that could result from changes in interest rates between the time they are originated and the time they are sold.

We use foreign currency forward transactions to hedge the foreign currency exposure of our net investment in various foreign equipment finance entities. These entities are denominated in a non-U.S. currency. These swaps are designated as net investment hedges to mitigate the exposure of measuring the net investment at the spot foreign exchange rate. Our last remaining net investment hedge was discontinued in the fourth quarter of 2019 in connection with the liquidation of the net assets of KEF's Canadian subsidiary.

Derivatives Not Designated in Hedge Relationships

We may enter into interest rate swap contracts to manage economic risks but do not designate the instruments in hedge relationships. Excluding contracts addressing customer exposures, the amount of derivatives hedging risks on an economic basis at December 31, 2019, was not significant.

Like other financial services institutions, we originate loans and extend credit, both of which expose us to credit risk. We actively manage our overall loan portfolio and the associated credit risk in a manner consistent with asset quality objectives and concentration risk tolerances to mitigate portfolio credit risk. Purchasing credit protection through default swaps enables us to transfer to a third party a portion of the credit risk associated with a particular extension of credit, including situations where there is a forecasted sale of loans. We purchase credit default swaps to reduce the credit risk associated with the debt securities held in our trading portfolio.

We also enter into derivative contracts for other purposes, including:

- interest rate swap, cap, and floor contracts entered into generally to accommodate the needs of commercial loan clients;
- energy and base metal swap and option contracts entered into to accommodate the needs of clients;
- foreign exchange forward and option contracts entered into primarily to accommodate the needs of clients; and

- futures contracts and positions with third parties that are intended to offset or mitigate the interest rate or market risk related to client positions discussed above.

Fair Values, Volume of Activity, and Gain/Loss Information Related to Derivative Instruments

The following table summarizes the fair values of our derivative instruments on a gross and net basis as of December 31, 2019, and December 31, 2018. The change in the notional amounts of these derivatives by type from December 31, 2018, to December 31, 2019, indicates the volume of our derivative transaction activity during 2019. The notional amounts are not affected by bilateral collateral and master netting agreements. The derivative asset and liability balances are presented on a gross basis, prior to the application of bilateral collateral and master netting agreements. Total derivative assets and liabilities are adjusted to take into account the impact of legally enforceable master netting agreements that allow us to settle all derivative contracts with a single counterparty on a net basis and to offset the net derivative position with the related cash collateral. Where master netting agreements are not in effect or are not enforceable under bankruptcy laws, we do not adjust those derivative assets and liabilities with counterparties. Securities collateral related to legally enforceable master netting agreements is not offset on the balance sheet. Our derivative instruments are included in "accrued income and other assets" or "accrued expenses and other liabilities" on the balance sheet, as indicated in the following table:

	December 31, 2019			December 31, 2018		
		Fair Value			Fair Value	
in millions	Notional Amount	Derivative Assets	Derivative Liabilities	Notional Amount	Derivative Assets	Derivative Liabilities
Derivatives designated as hedging instruments:						
Interest rate	$ 39,208	$ 191	$ 20	$ 28,546	$ 50	$ (10)
Foreign exchange	—	—	—	122	2	—
Total	39,208	191	20	28,668	52	(10)
Derivatives not designated as hedging instruments:						
Interest rate	71,209	772	233	63,454	365	307
Foreign exchange	6,572	67	60	6,829	104	95
Commodity	5,324	208	200	2,002	333	323
Credit	427	1	10	226	1	1
Other [(a)]	3,337	14	10	1,466	9	7
Total	86,869	1,062	513	73,977	812	733
Netting adjustments [(b)]	—	(473)	(335)	—	(333)	(337)
Net derivatives in the balance sheet	126,077	780	198	102,645	531	386
Other collateral [(c)]	—	(2)	(42)	—	(2)	(33)
Net derivative amounts	$ 126,077	$ 778	$ 156	$ 102,645	$ 529	$ 353

(a) Other derivatives include interest rate lock commitments and forward sale commitments related to our residential mortgage banking activities, forward purchase and sales contracts consisting of contractual commitments associated with "to be announced" securities and when issued securities.
(b) Netting adjustments represent the amounts recorded to convert our derivative assets and liabilities from a gross basis to a net basis in accordance with the applicable accounting guidance.
(c) Other collateral represents the amount that cannot be used to offset our derivative assets and liabilities from a gross basis to a net basis in accordance with the applicable accounting guidance. The other collateral consists of securities and is exchanged under bilateral collateral and master netting agreements that allow us to offset the net derivative position with the related collateral. The application of the other collateral cannot reduce the net derivative position below zero. Therefore, excess other collateral, if any, is not reflected above.

Fair value hedges. During the year ended December 31, 2019, we did not exclude any portion of these hedging instruments from the assessment of hedge effectiveness.

The following tables summarize the amounts that were recorded on the balance sheet as of December 31, 2019 and December 31, 2018, related to cumulative basis adjustments for fair value hedges.

	December 31, 2019		
in millions	Balance sheet line item in which the hedge item is included	Carrying amount of hedged item [(a)]	Hedge accounting basis adjustment [(b)]
Interest rate contracts	Long-term debt	$ 8,408	$ 240
Interest rate contracts	Certificate of deposit ($100,000 or more)	—	—
Interest rate contracts	Other time deposits	—	—

	December 31, 2018		
in millions	Balance sheet line item in which the hedge item is included	Carrying amount of hedged item [(a)]	Hedge accounting basis adjustment [(b)]
Interest rate contracts	Long-term debt	$ 9,363	$ (6)
Interest rate contracts	Certificate of deposit ($100,000 or more)	343	(1)

Interest rate contracts	Other time deposits	178	—

(a) The carrying amount represents the portion of the liability designated as the hedged item.
(b) Basis adjustments related to de-designated hedges that no longer qualify as fair value hedges reduced the hedge accounting basis adjustment by $9 million and $10 million at December 31, 2019 and December 31, 2018, respectively.

Cash flow hedges. During the year ended December 31, 2019, we did not exclude any portion of these hedging instruments from the assessment of hedge effectiveness.

Considering the interest rates, yield curves, and notional amounts as of December 31, 2019, we would expect to reclassify an estimated $132 million of after-tax net losses on derivative instruments from AOCI to income during the next 12 months for our cash flow hedges. In addition, we expect to reclassify approximately $3 million of pre-tax net losses related to terminated cash flow hedges from AOCI to income during the next 12 months. As of December 31, 2019, the maximum length of time over which we hedge forecasted transactions is 10 years.

The following tables summarize the effect of fair value and cash flow hedge accounting on the income statement for the years ended December 31, 2019, December 31, 2018, and December 31, 2017.

	Location and amount of net gains (losses) recognized in income on fair value and cash flow hedging relationships [a]				
in millions	Interest expense – long-term debt	Interest income – loans	Investment banking and debt placement fees	Interest expense – deposits	Other income
Twelve months ended December 31, 2019					
Total amounts presented in the consolidated statement of income	**$ (454)**	**$ 4,267**	**$ 630**	**$ (853)**	**$ 68**
Net gains (losses) on fair value hedging relationships					
Interest contracts					
Recognized on hedged items	**(247)**	**—**	**—**	**(1)**	**—**
Recognized on derivatives designated as hedging instruments	**231**	**—**	**—**	**—**	**—**
Net income (expense) recognized on fair value hedges	**(16)**	**—**	**—**	**(1)**	**—**
Net gain (loss) on cash flow hedging relationships					
Realized gains (losses) (pre-tax) reclassified from AOCI into net income					
Interest contracts	**(1)**	**15**	**—**	**—**	**—**
Foreign exchange contracts	**—**	**—**	**—**	**—**	**32**
Net income (expense) recognized on cash flow hedges	**$ (1)**	**$ 15**	**$ —**	**—**	**32**
Twelve months ended December 31, 2018					
Total amounts presented in the consolidated statement of income	$ (420)	$ 4,023	$ 650	$ (517)	$ 176
Net gains (losses) on fair value hedging relationships					
Interest contracts					
Recognized on hedged items	(5)	—	—	1	—
Recognized on derivatives designated as hedging instruments	(12)	—	—	—	—
Net income (expense) recognized on fair value hedges	(17)	—	—	$ 1	$ —
Net gain (loss) on cash flow hedging relationships					
Realized gains (losses) (pre-tax) reclassified from AOCI into net income					
Interest contracts	(2)	(68)	2	—	31
Net income (expense) recognized on cash flow hedges	$ (2)	$ (68)	$ 2	—	$ 31
Twelve months ended December 31, 2017					
Total amounts presented in the consolidated statement of income	$ (319)	$ 3,677	$ 603	$ (278)	$ 153
Net gains (losses) on fair value hedging relationships					
Interest contracts					
Recognized on hedged items	—	—	—	—	107
Recognized on derivatives designated as hedging instruments	49	—	—	—	(103)
Net income (expense) recognized on fair value hedges	49	—	—	—	$ 4
Net gain (loss) on cash flow hedging relationships					
Realized gains (losses) (pre-tax) reclassified from AOCI into net income					
Interest contracts	(4)	19	—	—	—
Gains (losses) (before tax) recognized in income for hedge ineffectiveness	—	—	—	—	—
Net income (expense) recognized on cash flow hedges	$ (4)	$ 19	$ —	—	—

(a) Prior period gain or loss amounts were not restated to conform to the new hedge accounting guidance adopted in 2018.

Net investment hedges. We previously entered into foreign currency forward contracts to hedge our exposure to changes in the carrying value of our investments in foreign subsidiaries as a result of changes in the related foreign exchange rates. In December 2019, our last remaining net investment hedge was discontinued in connection with the substantial liquidation of the net assets of KEF's Canadian subsidiary. The discontinuance of this hedge relationship resulted in reclassification from AOCI into other income of pre-tax gains of $32 million related to cumulative changes in the fair value of the net investment hedge. The gain was offset by the reclassification of $14 million from AOCI into other income related to the pre-tax foreign currency translation adjustment loss on the net investment balance.

We did not exclude any portion of our hedging instruments from the assessment of hedge effectiveness of the net investment hedges during the year ended December 31, 2019.

The following table summarizes the pre-tax net gains (losses) on our cash flow and net investment hedges for the years ended December 31, 2019, December 31, 2018, and December 31, 2017, and where they are recorded on the income statement. The table includes net gains (losses) recognized in OCI during the period and net gains (losses) reclassified from AOCI into income during the current period.

in millions	Net Gains (Losses) Recognized in OCI	Income Statement Location of Net Gains (Losses) Reclassified From OCI Into Income	Net Gains (Losses) Reclassified From OCI Into Income (a)	Net Gains (Losses) Recognized in Other Income (a)
Twelve months ended December 31, 2019				
Cash Flow Hedges				
Interest rate	**$ 442**	Interest income — Loans	**$ 15**	**$ —**
Interest rate	**(1)**	Interest expense — Long-term debt	**(1)**	**—**
Interest rate	**3**	Investment banking and debt placement fees	**—**	**—**
Net Investment Hedges				
Foreign exchange contracts	**(4)**	Other Income	**32**	**—**
Total	**$ 440**		**$ 46**	**$ —**
Twelve months ended December 31, 2018				
Cash Flow Hedges				
Interest rate	$ (13)	Interest income — Loans	$ (68)	$ —
Interest rate	2	Interest expense — Long-term debt	(2)	—
Interest rate	1	Investment banking and debt placement fees	2	—
Net Investment Hedges				
Foreign exchange contracts	19	Other Income	31	—
Total	$ 9		$ (37)	$ —
Twelve months ended December 31, 2017				
Cash Flow Hedges				
Interest rate	$ (59)	Interest income — Loans	$ 19	$ —
Interest rate	—	Interest expense — Long-term debt	(4)	—
Interest rate	(1)	Investment banking and debt placement fees	—	—
Net Investment Hedges				
Foreign exchange contracts	(17)	Other Income	—	—
Total	$ (77)		$ 15	$ —

(a) Prior period gain or loss amounts were not restated to conform to the new hedge accounting guidance adopted in 2018.

Nonhedging instruments.

The following table summarizes the pre-tax net gains (losses) on our derivatives that are not designated as hedging instruments for the years ended December 31, 2019, December 31, 2018, and December 31, 2017, and where they are recorded on the income statement.

	2019				2018				2017			
Year ended December 31, *in millions*	Corporate Services Income	Consumer Mortgage Income	Other Income	Total	Corporate Services Income	Consumer Mortgage Income	Other Income	Total	Corporate Services Income	Consumer Mortgage Income	Other Income	Total
NET GAINS (LOSSES)												
Interest rate	**$ 46**	**—**	**$ (2)**	**$ 44**	$ 38	—	$ (1)	$ 37	$ 29	—	$ (1)	$ 28
Foreign exchange	**45**	**—**	**—**	**45**	42	—	—	42	41	—	—	41
Commodity	**6**	**—**	**—**	**6**	8	—	—	8	6	—	—	6
Credit	**(6)**	**—**	**(36)**	**(42)**	2	—	(30)	(28)	2	—	(21)	(19)
Other	**—**	**$ 2**	**—**	**2**	—	$ (1)	12	11	—	$ (1)	(6)	(7)
Total net gains (losses)	**$ 91**	**$ 2**	**$ (38)**	**$ 55**	$ 90	$ (1)	$ (19)	$ 70	$ 78	$ (1)	$ (28)	$ 49

Counterparty Credit Risk

We use several means to mitigate and manage exposure to credit risk on derivative contracts. We enter into bilateral collateral and master netting agreements that provide for the net settlement of all contracts with a single counterparty in the event of default. Additionally, we monitor counterparty credit risk exposure on each contract to determine appropriate limits on our total credit exposure across all product types. We review our collateral positions on a daily basis and exchange collateral with our counterparties in accordance with standard ISDA documentation, central clearing rules, and other related agreements. We hold collateral in the form of cash and highly rated securities issued by the U.S. Treasury, government-sponsored enterprises, or GNMA. Cash collateral netted against derivative assets on the balance sheet totaled $207 million at December 31, 2019, and $33 million at December 31, 2018. The cash collateral netted against derivative liabilities totaled $69 million at December 31, 2019, and $37 million at December 31, 2018.

The following table summarizes the fair value of our derivative assets by type at the dates indicated. These assets represent our gross exposure to potential loss after taking into account the effects of bilateral collateral and master netting agreements and other means used to mitigate risk.

December 31, *in millions*	**2019**	2018
Interest rate	**$ 848**	$ 308
Foreign exchange	**30**	60
Commodity	**95**	187
Credit	**—**	—
Other	**14**	9
Derivative assets before collateral	**987**	564
Less: Related collateral	**207**	33
Total derivative assets	**$ 780**	$ 531

We enter into derivative transactions with two primary groups: broker-dealers and banks, and clients. Since these groups have different economic characteristics, we have different methods for managing counterparty credit exposure and credit risk.

We enter into transactions with broker-dealers and banks for various risk management purposes. These types of transactions are primarily high dollar volume. We enter into bilateral collateral and master netting agreements with these counterparties. We clear certain types of derivative transactions with these counterparties, whereby central clearing organizations become the counterparties to our derivative contracts. In addition, we enter into derivative contracts through swap execution facilities. Swap clearing and swap execution facilities reduce our exposure to counterparty credit risk. At December 31, 2019, we had gross exposure of $431 million to broker-dealers and banks. We had net exposure of $107 million after the application of master netting agreements and cash collateral, where such qualifying agreements exist. We had net exposure of $105 million after considering $2 million of additional collateral held in the form of securities.

We enter into transactions using master netting agreements with clients to accommodate their business needs. In most cases, we mitigate our credit exposure by cross-collateralizing these transactions to the underlying loan collateral. For transactions that are not clearable, we mitigate our market risk by buying and selling U.S. Treasuries and Eurodollar futures or entering into offsetting positions. Due to the cross-collateralization to the underlying loan, we typically do not exchange cash or marketable securities collateral in connection with these transactions. To address the risk of default associated with these contracts, we have established a CVA reserve (included in “accrued income and other assets”) in the amount of $27 million at December 31, 2019. The CVA is calculated from potential future exposures, expected recovery rates, and market-implied probabilities of default. At December 31, 2019, we had gross exposure of $753 million to client counterparties and other entities that are not broker-dealers or banks for derivatives that have associated master netting agreements. We had net exposure of $672 million on our derivatives with these counterparties after the application of master netting agreements, collateral, and the related reserve.

Credit Derivatives

We are a buyer and, under limited circumstances, may be a seller of credit protection through the credit derivative market. We purchase credit derivatives to manage the credit risk associated with specific commercial lending and swap obligations as well as exposures to debt securities. Our credit derivative portfolio was in a net liability position of $9 million as of December 31, 2019 and less than $1 million as of December 31, 2018.

Our credit derivative portfolio consists of the following:

- *Single-name credit default swap*: A bilateral contract whereby the seller agrees, for a premium, to provide protection against the credit risk of a specific entity (the “reference entity”) in connection with a specific debt obligation. The protected credit risk is related to adverse credit events, such as bankruptcy, failure to make payments, and acceleration or restructuring of obligations, identified in the credit derivative contract.

- *Traded credit default swap index:* Represents a position on a basket or portfolio of reference entities.

- *Risk participation agreement:* A transaction in which the lead participant has a swap agreement with a customer. The lead participant (purchaser of protection) then enters into a risk participation agreement with a counterparty (seller of protection), under which the counterparty receives a fee to accept a portion of the lead participant's credit risk. If the customer defaults on the swap contract, the counterparty to the risk participation agreement must reimburse the lead participant for the counterparty's percentage of the positive fair value of the customer swap as of the default date. If the customer swap has a negative fair value, the counterparty has no reimbursement requirements. If the customer defaults on the swap contract and the seller fulfills its payment obligations under the risk participation agreement, the seller is entitled to a *pro rata* share of the lead participant's claims against the customer under the terms of the swap agreement.

The following table provides information on the types of credit derivatives sold by us and held on the balance sheet at December 31, 2019, and December 31, 2018. The notional amount represents the amount that the seller could be required to pay. The payment/performance risk shown in the table represents a weighted average of the default probabilities for all reference entities in the respective portfolios. These default probabilities are implied from observed credit indices in the credit default swap market, which are mapped to reference entities based on Key's internal risk rating.

	2019			2018		
December 31, *dollars in millions*	**Notional Amount**	**Average Term (Years)**	**Payment / Performance Risk**	**Notional Amount**	**Average Term (Years)**	**Payment / Performance Risk**
Other	**$ 134**	**14.30**	**14.56%**	$ 22	13.43	17.18%
Total credit derivatives sold	**$ 134**	**—**	**—**	$ 22	—	—

Credit Risk Contingent Features

We have entered into certain derivative contracts that require us to post collateral to the counterparties when these contracts are in a net liability position. The amount of collateral to be posted is based on the amount of the net liability and thresholds generally related to our long-term senior unsecured credit ratings with Moody's and S&P. Collateral requirements also are based on minimum transfer amounts, which are specific to each Credit Support Annex (a component of the ISDA Master Agreement) that we have signed with the counterparties. In a limited number of instances, counterparties have the right to terminate their ISDA Master Agreements with us if our ratings fall below a certain level, usually investment-grade level (i.e., "Baa3" for Moody's and "BBB-" for S&P). At December 31, 2019, KeyBank's rating was "A3" with Moody's and "A-" with S&P, and KeyCorp's rating was "Baa1" with Moody's and "BBB+" with S&P. As of December 31, 2019, the aggregate fair value of all derivative contracts with credit risk contingent features (i.e., those containing collateral posting or termination provisions based on our ratings) held by KeyBank that were in a net liability position totaled $62 million, which includes $25 million in derivative assets and $87 million in derivative liabilities. We had $60 million in cash and securities collateral posted to cover those positions as of December 31, 2019. There were no derivative contracts with credit risk contingent features held by KeyCorp at December 31, 2019.

The following table summarizes the additional cash and securities collateral that KeyBank would have been required to deliver under the ISDA Master Agreements had the credit risk contingent features been triggered for the derivative contracts in a net liability position as of December 31, 2019, and December 31, 2018. The additional collateral amounts were calculated based on scenarios under which KeyBank's ratings are downgraded one, two, or three ratings as of December 31, 2019, and December 31, 2018, and take into account all collateral already posted. A similar calculation was performed for KeyCorp, and no additional collateral would have been required at December 31, 2019, or December 31, 2018.

	2019		2018	
December 31, *in millions*	**Moody's**	**S&P**	**Moody's**	**S&P**
KeyBank's long-term senior unsecured credit ratings	**A3**	**A-**	A3	A-
One rating downgrade	**$ 1**	**$ 1**	$ 2	$ 2
Two rating downgrades	**1**	**1**	2	2
Three rating downgrades	**1**	**1**	2	2

KeyBank's long-term senior unsecured credit rating was four ratings above noninvestment grade at Moody's and S&P as of December 31, 2019, and December 31, 2018. If KeyBank's ratings had been downgraded below investment grade as of December 31, 2019, and December 31, 2018, payments of up to $3 million and $4 million, respectively, would have been required to either terminate the contracts or post additional collateral for those contracts in a net liability position, taking into account all collateral already posted. If KeyCorp's ratings had been downgraded below investment grade as of December 31, 2019, and December 31, 2018, no payments would have been required to either terminate the contracts or post additional collateral for those contracts in a net liability position, taking into account all collateral already posted.

9. Mortgage Servicing Assets

We originate and periodically sell commercial and residential mortgage loans but continue to service those loans for the buyers. We also may purchase the right to service commercial mortgage loans for other lenders. We record a servicing asset if we purchase or retain the right to service loans in exchange for servicing fees that exceed the going market servicing rate and are considered more than adequate compensation for servicing. Additional information pertaining to the accounting for mortgage and other servicing assets is included in Note 1 ("Summary of Significant Accounting Policies") under the heading "Servicing Assets."

Commercial

Changes in the carrying amount of commercial mortgage servicing assets are summarized as follows:

Year ended December 31, *in millions*	**2019**	**2018**
Balance at beginning of period	**$ 502**	$ 412
Servicing retained from loan sales	**108**	117
Purchases	**47**	75
Amortization	**(115)**	(102)
Temporary impairments	**(3)**	—
Balance at end of period	**$ 539**	$ 502
Fair value at end of period	**$ 665**	$ 757

The fair value of commercial mortgage servicing assets is determined by calculating the present value of future cash flows associated with servicing the commercial mortgage loans. This calculation uses a number of assumptions that are based on current market conditions. The range and weighted-average of the significant unobservable inputs used to fair value our commercial mortgage servicing assets at December 31, 2019, and December 31, 2018, along with the valuation techniques, are shown in the following table:

dollars in millions		**December 31, 2019**	**December 31, 2018**
Valuation Technique	**Significant Unobservable Input**	**Range (Weighted-Average)**	
Discounted cash flow	Expected defaults	**1.00 - 2.00% (1.13%)**	1.00 - 2.00% (1.14%)
	Residual cash flows discount rate	**7.00 - 11.44% (9.32%)**	7.00 - 15.00% (9.18%)
	Escrow earn rate	**1.44 - 2.32% (2.03%)**	2.56 - 4.20% (3.35%)
	Loan assumption rate	**0.01 - 3.37% (1.37%)**	0.00 - 3.22% (1.35%)

If these economic assumptions change or prove incorrect, the fair value of commercial mortgage servicing assets may also change. Expected credit losses, escrow earn rates, and discount rates are critical to the valuation of commercial mortgage servicing assets. Estimates of these assumptions are based on how a market participant would view the respective rates and reflect historical data associated with the commercial mortgage loans, industry trends, and other considerations. Actual rates may differ from those estimated due to changes in a variety of economic factors. A decrease in the value assigned to the escrow earn rates would cause a decrease in the fair value of our commercial mortgage servicing assets. An increase in the assumed default rates of commercial mortgage loans or an increase in the assigned discount rates would cause a decrease in the fair value of our commercial mortgage servicing assets. Prepayment activity on commercial serviced loans does not significantly impact the valuation of our commercial mortgage servicing assets. Unlike residential mortgages, commercial mortgages experience significantly lower prepayments due to certain contractual restrictions impacting the borrower's ability to prepay the mortgage.

The amortization of commercial mortgage servicing assets for each period, as shown in the table at the beginning of this note, is recorded as a reduction to contractual fee income. The contractual fee income from servicing commercial mortgage loans totaled $196 million for the year ended December 31, 2019, $171 million for the year ended December 31, 2018, and $150 million for the year ended December 31, 2017. This fee income was partially offset by $118 million of amortization for the year ended December 31, 2019, $102 million for the year ended December 31, 2018, and $90 million for the year ended December 31, 2017. Both the contractual fee income and the amortization are recorded, net, in “mortgage servicing fees” on the income statement.

Residential

Changes in the carrying amount of residential mortgage servicing assets are summarized as follows:

in millions	2019	2018
Balance at beginning of period	$ 37	31
Servicing retained from loan sales	15	$ 10
Purchases	—	—
Amortization	(6)	(4)
Balance at end of period	$ 46	$ 37
Fair value at end of period	$ 50	$ 52

The fair value of residential mortgage servicing assets is determined by calculating the present value of future cash flows associated with servicing the residential mortgage loans. This calculation uses a number of assumptions that are based on current market conditions. The range and weighted-average of the significant unobservable inputs used to fair value our residential mortgage servicing assets at December 31, 2019, along with the valuation techniques, are shown in the following table:

		December 31, 2019	December 31, 2018
Valuation Technique	Significant Unobservable Input	Range (Weighted-Average)	
Discounted cash flow	Prepayment speed	10.38 - 61.51% (12.95%)	8.45 - 56.11% (9.08%)
	Discount rate	7.50 - 8.50% (7.52%)	7.50 - 10.00% (7.54%)
	Servicing cost	$62 - $4,375 ($68.73)	$62 - $5,125 ($68.25)

If these economic assumptions change or prove incorrect, the fair value of residential mortgage servicing assets may also change. Prepayment speed, discount rates, and servicing cost are critical to the valuation of residential mortgage servicing assets. Estimates of these assumptions are based on how a market participant would view the respective rates and reflect historical data associated with the residential mortgage loans, industry trends, and other considerations. Actual rates may differ from those estimated due to changes in a variety of economic factors. An increase in the prepayment speed would cause a decrease in the fair value of our residential mortgage servicing assets. An increase in the assigned discount rates and servicing cost assumptions would cause a decrease in the fair value of our residential mortgage servicing assets.

The amortization of residential mortgage servicing assets for December 31, 2019, as shown in the table above, is recorded as a reduction to contractual fee income. The contractual fee income from servicing residential mortgage loans totaled $21 million for the year ended December 31, 2019, $14 million for the year ended December 31, 2018, and $12 million for the year ended December 31, 2017. This fee income was offset by $6 million of amortization for the year ended December 31, 2019, $4 million for the year ended December 31, 2018, and $4 million for the year ended December 31, 2017. Both the contractual fee income and the amortization are recorded, net, in “mortgage servicing fees” on the income statement.

10. Leases

As a lessee, we enter into leases of land, buildings, and equipment. Our real estate leases primarily relate to bank branches and office space. The leases of equipment principally relate to technology assets for data processing and data storage. As a lessor, we primarily provide financing through our equipment leasing business.

Lessee

Our leases are classified as either operating or financing and have remaining terms ranging from 1 to 20 years with the exception of certain ground leases that have terms over 30 years. For leases with initial terms greater than one year, a lease liability, measured as the present value of unpaid lease payments, and a corresponding right-of-use asset for the right to use the leased properties are reported on the balance sheet. Lease payments are discounted using Key's incremental borrowing rate, consistent with what Key would pay to borrow on a collateralized basis over a term similar to each lease. Leases with an initial term of less than one year are not recorded on the balance sheet. The related expense is recognized on a straight-line basis over the lease term.

Certain leases contain options to extend the lease term for up to five years. Some leases give us the option to terminate, for a penalty or at the lessor's discretion. Leases with variable payments are primarily based on adjustments for inflation over the term of the lease based on a contractually defined index. Certain ATM leases include variable payments based on volume of transactions.

Operating lease expense is recognized in "net occupancy" and "equipment" on the income statement. The components of lease expense are summarized as follows:

in millions	Twelve months ended December 31, 2019
Operating lease cost	$ 136
Finance lease cost:	
Amortization of right-of-use assets	2
Interest on lease liabilities	1
Variable lease cost	24
Total lease cost [(a)]	$ 163

(a) Short-term lease cost was less than less than $1 million for the twelve months ended December 31, 2019.

Cash flows related to leases are summarized as follows:

in millions	Twelve months ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from finance leases	$ 1
Operating cash flows from operating leases	146
Financing cash flows from finance leases	2
Right-of-use assets obtained in exchange for lease obligations: [(a)]	
Operating leases	$ 81
Net gain recognized from sale leaseback transaction [(b)]	$ 14

(a) There were no right-of-use assets obtained in exchange for finance lease obligations for the twelve months ended December 31, 2019.
(b) During the third quarter of 2019, we entered into a sale leaseback transaction related to one branch which resulted in total proceeds of $16 million.

Additional balance sheet information related to leases is summarized as follows:

in millions	Balance sheet classification	December 31, 2019
Operating lease assets	Accrued income and other assets	$ 654
Operating lease liabilities	Accrued expense and other liabilities	748
Finance leases:		
Property and equipment, gross	Premises and equipment	28
Accumulated depreciation	Premises and equipment	(17)
Property and equipment, net		11
Finance lease liabilities	Long-term debt	13

Information pertaining to the lease term and weighted-average discount rate is summarized as follows:

	December 31, 2019
Weighted-average remaining lease term:	
Operating leases	7.5
Finance leases	6.06
Weighted-average discount rate:	
Operating leases	3.26%
Finance leases	3.94%

Maturities of lease liabilities are summarized as follows:

in millions	Operating Leases	Finance Leases	Total
2020	$ 142	$ 3	$ 145
2021	131	3	134
2022	117	2	119
2023	101	2	103
2024	82	1	83
Thereafter	265	4	269
Total lease payments	838	15	853
Less imputed interest	90	2	92
Total	$ 748	$ 13	$ 761

Lessor Equipment Leasing

Leases may have fixed or floating rate terms. Variable payments are based on an index or other specified rate and are included in rental payments. Certain leases contain an option to extend the lease term or the option to terminate at the discretion of the lessee. Under certain conditions, lease agreements may also contain the option for a lessee to purchase the underlying asset.

Interest income from sales-type and direct financing leases is recognized in "interest income — loans" on the statement of income. Income related to operating leases is recognized in “operating lease income and other leasing gains” on the income statement. The components of equipment leasing income are summarized in the table below:

in millions	Twelve months ended December 31, 2019
Sales-type and direct financing leases	
Interest income on lease receivable	$ 121
Interest income related to accretion of unguaranteed residual asset	13
Interest income on deferred fees and costs	—
Total sales-type and direct financing lease income	134
Operating leases	
Operating lease income related to lease payments	133
Other operating leasing gains	28
Total operating lease income and other leasing gains	161
Total lease income	$ 295

Equipment leasing receivables relate to sales-type and direct financing leases. The composition of the net investment in sales-type and direct financing leases is as follows:

in millions	December 31, 2019
Lease receivables	$ 3,792
Unearned income	(329)
Unguaranteed residual value	490
Deferred fees and costs	16
Net investment in sales-type and direct financing leases	$ 3,969

The residual value component of a lease represents the fair value of the leased asset at the end of the lease term. We rely on industry data, historical experience, independent appraisals and the experience of the equipment leasing asset management team to value lease residuals. Relationships with a number of equipment vendors give the asset management team insight into the life cycle of the leased equipment, pending product upgrades and competing products. Effective January 1, 2019, as a result of the implementation of ASU 2016-02, Key assesses net investments in leases, including residual values, for impairment and recognizes any impairment losses in accordance with the impairment guidance for financial instruments. The carrying amount of residual assets covered by residual value guarantees was $289 million at December 31, 2019.

At December 31, 2019, minimum future lease payments to be received for sales-type and direct financing leases are as follows:

in millions	Sales-type and direct financing lease payments
2020	$ 1,127
2021	867
2022	634
2023	413
2024	258
Thereafter	496
Total lease payments	$ 3,795

At December 31, 2019, minimum future lease payments to be received for operating leases are as follows:

in millions	Operating lease payments
2020	$ 129
2021	114
2022	97
2023	80
2024	69
Thereafter	167
Total lease payments	$ 656

The carrying amount of operating lease assets at December 31, 2019, was $941 million.

11. Premises and Equipment

Premises and equipment at December 31, 2019, and December 31, 2018, consisted of the following:

dollars in millions	**Useful life** *(in years)*	December 31, 2019	December 31, 2018
Land	Indefinite	**$ 128**	$ 135
Buildings and improvements	15-40	**729**	747
Leasehold improvements	1-15	**620**	626
Furniture and equipment	2-15	**872**	907
Capitalized building leases	1-14 [(a)]	**28**	28
Construction in process	N/A	**48**	35
Total premises and equipment		**2,425**	2,478
Less: Accumulated depreciation and amortization		**(1,611)**	(1,596)
Premises and equipment, net		**$ 814**	$ 882

(a) Capitalized building and equipment leases are amortized over the lesser of the useful life of asset or lease term.

Depreciation and amortization expense related to premises and equipment for the years ended December 31, 2019, December 31, 2018, and December 31, 2017 was $118 million, $131 million, and $138 million, respectively. This includes amortization of assets under capital leases.

12. Goodwill and Other Intangible Assets

Our annual goodwill impairment testing is performed as of October 1 each year, or more frequently as events occur or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying amount. Additional information pertaining to our accounting policy for goodwill and other intangible assets is summarized in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Goodwill and Other Intangible Assets.”

We conducted a quantitative analysis as of October 1, 2019, and concluded goodwill was not impaired.

We determined that the estimated fair value of each of Key’s reporting units was greater than its carrying amount. The estimated fair value of the Consumer Bank reporting unit was 76% greater than its carrying amount, the estimated fair value of the Commercial Bank reporting unit was 29% greater than its carrying amount and the estimated fair value of the Institutional Bank reporting unit, which is aggregated in the Commercial Bank reporting segment, was 34% greater than its carrying amount. The fair values of each reporting unit were estimated using a combination of income and market approaches. The income approach utilized discounted cash flow projections for each reporting unit. The market approach consisted primarily of public company metrics but also considered recent transactions in the financial services industry. The carrying amounts of Key's reporting units represent the average equity based on risk-weighted regulatory capital for goodwill impairment testing and management reporting purposes.

Based on our quarterly review of impairment indicators during 2019 and 2018, it was not necessary to perform further reviews of goodwill recorded in our reporting units. We will continue to monitor as appropriate.

Changes in the carrying amount of goodwill by reporting segment are presented in the following table:

in millions	Consumer Bank	Commercial Bank	Total
BALANCE AT DECEMBER 31, 2017	$ 2,124	$ 414	$ 2,538
KIBS divestiture	(22)	—	(22)
BALANCE AT DECEMBER 31, 2018	2,102	414	2,516
Reallocation of goodwill	**(498)**	**498**	**—**
Laurel Road acquisition	**148**	**—**	**148**
BALANCE AT DECEMBER 31, 2019	**$ 1,752**	**$ 912**	**$ 2,664**

Additional information regarding the above acquisition and divestiture is provided in Note 15 ("Acquisitions, Divestiture, and Discontinued Operations"). Additional information regarding the above reallocation of goodwill is provided in Note 25 ("Business Segment Reporting").

As of December 31, 2019, we expect goodwill in the amount of $608 million to be deductible for tax purposes in future periods.

There were no accumulated impairment losses related to any of Key's reporting units at December 31, 2019, December 31, 2018, and December 31, 2017.

The following table shows the gross carrying amount and the accumulated amortization of intangible assets subject to amortization:

	2019		2018	
December 31, *in millions*	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Intangible assets subject to amortization:				
Core deposit intangibles	**$ 355**	**$ 193**	$ 396	$ 184
PCCR intangibles	**152**	**145**	152	138
Other intangible assets	**115**	**31**	115	25
Total	**$ 622**	**$ 369**	$ 663	$ 347

The following table presents estimated intangible asset amortization expense for the next five years.

	Estimated				
in millions	2020	2021	2022	2023	2024
Intangible asset amortization expense	$ 62	$ 52	$ 43	$ 34	$ 25

13. Variable Interest Entities

A VIE is a partnership, limited liability company, trust, or other legal entity that meets any one of the following criteria:

- The entity does not have sufficient equity to conduct its activities without additional subordinated financial support from another party.
- The entity's investors lack the power to direct the activities that most significantly impact the entity's economic performance.

- The entity's equity at risk holders do not have the obligation to absorb losses or the right to receive residual returns.
- The voting rights of some investors are not proportional to their economic interests in the entity, and substantially all of the entity's activities involve, or are conducted on behalf of, investors with disproportionately few voting rights.

Our significant VIEs are summarized below. We define a "significant interest" in a VIE as a subordinated interest that exposes us to a significant portion, but not the majority, of the VIE's expected losses or residual returns, even though we do not have the power to direct the activities that most significantly impact the entity's economic performance.

LIHTC investments. Through KCDC, we have made investments directly and indirectly in LIHTC operating partnerships formed by third parties. As a limited partner in these operating partnerships, we are allocated tax credits and deductions associated with the underlying properties. We have determined that we are not the primary beneficiary of these investments because the general partners have the power to direct the activities that most significantly influence the economic performance of their respective partnerships and have the obligation to absorb expected losses and the right to receive residual returns. As we are not the primary beneficiary of these investments, we do not consolidate them.

Our maximum exposure to loss in connection with these partnerships consists of our unamortized investment balance plus any unfunded equity commitments and tax credits claimed but subject to recapture. We had $1.5 billion and $1.4 billion of investments in LIHTC operating partnerships at December 31, 2019, and December 31, 2018, respectively. These investments are recorded in "accrued income and other assets" on our balance sheet. We do not have any loss reserves recorded related to these investments because we believe the likelihood of any loss is remote. For all legally binding unfunded equity commitments, we increase our recognized investment and recognize a liability. As of December 31, 2019, and December 31, 2018, we had liabilities of $546 million and $532 million, respectively, related to investments in qualified affordable housing projects, which are recorded in "accrued expense and other liabilities" on our balance sheet. We continue to invest in these LIHTC operating partnerships.

The assets and liabilities presented in the table below convey the size of KCDC's direct and indirect investments at December 31, 2019, and December 31, 2018. As these investments represent unconsolidated VIEs, the assets and liabilities of the investments themselves are not recorded on our balance sheet.

	Unconsolidated VIEs		
in millions	**Total Assets**	**Total Liabilities**	**Maximum Exposure to Loss**
December 31, 2019			
LIHTC investments	**$ 6,405**	**$ 2,526**	**$ 1,846**
December 31, 2018			
LIHTC investments	$ 5,932	$ 2,569	$ 1,740

We amortize our LIHTC investments over the period that we expect to receive the tax benefits. In 2019, we recognized $187 million of amortization and $184 million of tax credits associated with these investments within "income taxes" on our income statement. In 2018, we recognized $170 million of amortization and $166 million of tax credits associated with these investments within "income taxes" on our income statement.

Principal investments. Through our principal investing entity, KCC, we have made investments in private equity funds engaged in venture- and growth-oriented investing. As a limited partner to these funds, KCC records these investments at fair value and receives distributions from the funds in accordance with the funds' partnership agreements. We are not the primary beneficiary of these investments as we do not hold the power to direct the activities that most significantly affect the funds' economic performance. Such power rests with the funds' general partners. In addition, we neither have the obligation to absorb the funds' expected losses nor the right to receive their residual returns. Our voting rights are also disproportionate to our economic interests, and substantially all of the funds' activities are conducted on behalf of investors with disproportionately few voting rights. Because we are not the primary beneficiary of these investments, we do not consolidate them.

Our maximum exposure to loss associated with indirect principal investments consists of the investments' fair value plus any unfunded equity commitments. The fair value of our indirect principal investments totaled $68 million and

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$96 million at December 31, 2019, and December 31, 2018, respectively. These investments are recorded in "other investments" on our balance sheet. Additional information on indirect principal investments is provided in Note 6 ("Fair Value Measurements"). The table below reflects the size of the private equity funds in which KCC was invested as well as our maximum exposure to loss in connection with these investments at December 31, 2019.

	Unconsolidated VIEs		
in millions	Total Assets	Total Liabilities	Maximum Exposure to Loss
December 31, 2019			
Indirect investments	**$ 12,954**	**$ 205**	**$ 89**
December 31, 2018			
Indirect investments	$ 19,659	$ 376	$ 122

Through our principal investing entities, we have formed and funded operating entities that provide management and other related services to our investment company funds, which directly invest in portfolio companies. In return for providing services to our direct investment funds, these entities' receive a minority equity interest in the funds. This minority equity ownership is recorded at fair value on the entities' financial statements. Additional information on our direct principal investments is provided in Note 6 ("Fair Value Measurements"). While other equity investors manage the daily operations of these entities, we retain the power, through voting rights, to direct the activities of the entities that most significantly impact their economic performance. In addition, we have the obligation to absorb losses and the right to receive residual returns that could potentially be significant to these entities. As a result, we have determined that we are the primary beneficiary of these funds and have consolidated them since formation. The entities had no assets and no liabilities at December 31, 2019, and December 31, 2018.

Other unconsolidated VIEs. We are involved with other various entities in the normal course of business which we have determined to be VIEs. We have determined that we are not the primary beneficiary of these VIEs because we do not have the power to direct the activities that most significantly impact their economic performance. Our assets associated with these unconsolidated VIEs totaled $282 million at December 31, 2019, and $248 million at December 31, 2018. These assets are recorded in "accrued income and other assets," "other investments," "securities available for sale," and "loans, net of unearned income" on our balance sheet. We had liabilities totaling $1 million associated with these unconsolidated VIEs at December 31, 2019, and $2 million at December 31, 2018. These liabilities are recorded in "accrued expenses and other liabilities" on our balance sheet. We have excluded certain transactions with unconsolidated VIEs from the balances above where we determine our continuing involvement is not significant. In addition, where we only have a lending arrangement in the normal course of business with unconsolidated VIEs we present the balances related to the lending arrangements in Note 5 ("Asset Quality").

14. Income Taxes

Income taxes included in the income statement are summarized below. We file a consolidated federal income tax return.

Year ended December 31, *in millions*	2019	2018	2017
Currently payable:			
Federal	**$ 241**	$ 184	$ 334
State	**20**	62	—
Total currently payable	**261**	246	334
Deferred:			
Federal	**34**	117	274
State	**19**	(19)	29
Total deferred	**53**	98	303
Total income tax (benefit) expense (a)	**$ 314**	$ 344	$ 637

(a) There was income tax (benefit) expense on securities transactions of $5 million in 2019, and no income tax (benefit) expense on securities transactions in 2018 and 2017. Income tax expense excludes equity- and gross receipts-based taxes, which are assessed in lieu of an income tax in certain states in which we operate. These non-income taxes, which are recorded in "noninterest expense" on the income statement, totaled $23 million in 2019, $15 million in 2018, and $22 million in 2017.

On December 22, 2017, the TCJ Act was signed into law. This comprehensive tax legislation provided for significant changes to the U.S. Internal Revenue Code of 1986, as amended, that impacted corporate taxation requirements such as the reduction in the federal corporate income tax rate from 35% to 21% effective January 1, 2018.

We were required to re-value certain tax-related assets under the provisions of the TCJ Act at December 31, 2017. Under current U.S. GAAP, deferred tax assets and liabilities are to be adjusted for the effect of a change in tax laws or rates with the effect included in income from continuing operations in the reporting period that includes the enactment date. The tax-related assets consist primarily of deferred tax assets and liabilities and investments in low-income housing transactions. We recorded a $147 million, or 7.6%, increase in our income tax provision for the twelve months ended December 31, 2017, due to the reduction to our net deferred tax asset and related actions.

During 2018, we completed and filed our 2017 federal income tax return and management finalized its assessment of the initial impact of the TCJ Act and related regulatory guidance. As a result, our income tax provision was increased by $7 million.

Significant components of our deferred tax assets and liabilities included in “accrued income and other assets” and “accrued expense and other liabilities,” respectively, on the balance sheet, are as follows:

December 31, *in millions*	**2019**	2018
Allowance for loan and lease losses	**$ 236**	$ 232
Employee benefits	**164**	170
Net unrealized securities losses	**—**	144
Federal net operating losses and credits	**81**	34
Fair value adjustments	**21**	41
Non-tax accruals	**61**	80
Operating lease liabilities [(a)]	**178**	—
State net operating losses and credits	**1**	3
Other	**245**	221
Gross deferred tax assets	**987**	925
Less: Valuation Allowance	**—**	11
Total deferred tax assets	**987**	914
Leasing transactions	**628**	531
Net unrealized securities gains	**117**	—
Operating lease right-of-use assets [(a)]	**156**	—
Other	**175**	161
Total deferred tax liabilities	**1,076**	692
Net deferred tax assets (liabilities) [(b)]	**$ (89)**	$ 222

(a) A separate deferred tax asset and liability is recognized for each operating lease item resulting from the adoption of ASC 842 in 2019.
(b) From continuing operations.

We conduct quarterly assessments of all available evidence to determine the amount of deferred tax assets that are more-likely-than-not to be realized, and therefore recorded. The available evidence used in connection with these assessments includes taxable income in prior periods, projected future taxable income, potential tax-planning strategies, and projected future reversals of deferred tax items. These assessments involve a degree of subjectivity and may undergo significant change. Based on these criteria, we have no recorded valuation allowances at December 31, 2019.

At December 31, 2019, we had federal net operating loss carryforwards of $43 million and federal credit carryforwards of $72 million. The federal net operating loss carryforwards are from prior acquisitions by First Niagara and are subject to annual limitations under the tax code and, if not utilized, will expire in the years beginning 2027. The federal credit carryforward consists of general business credits which expire in 2037, under the Internal Revenue Code. We currently expect to fully utilize these losses and credits.

We had state net operating loss carryforwards of $40 million, resulting in a net state deferred tax asset of $1 million.

The following table shows how our total income tax expense (benefit) and the resulting effective tax rate were derived:

Year ended December 31, *dollars in millions*	**2019**		**2018**		**2017**	
	Amount	**Rate**	**Amount**	**Rate**	**Amount**	**Rate**
Income (loss) before income taxes times 21% (35% for 2017) statutory federal tax rate	**$ 425**	**21.0 %**	$ 463	21.0 %	$ 675	35.0 %
Amortization of tax-advantaged investments	**132**	**6.5**	127	5.8	104	5.4
Foreign tax adjustments	**—**	**—**	2	.1	1	.1
Tax-exempt interest income	**(30)**	**(1.5)**	(30)	(1.4)	(37)	(1.9)
Corporate-owned life insurance income	**(29)**	**(1.4)**	(29)	(1.3)	(46)	(2.4)
State income tax, net of federal tax benefit	**31**	**1.5**	34	1.5	19	1.0
Tax credits	**(231)**	**(11.4)**	(234)	(10.6)	(218)	(11.3)
Tax Cuts and Jobs Act	**—**	**—**	7	.3	147	7.6
Other	**16**	**.9**	4	.2	(8)	(.5)
Total income tax expense (benefit)	**$ 314**	**15.6 %**	$ 344	15.6 %	$ 637	33.0 %

Liability for Unrecognized Tax Benefits

The change in our liability for unrecognized tax benefits is as follows:

Year ended December 31, in millions	**2019**	**2018**
Balance at beginning of year	**$ 35**	$ 39
Increase for other tax positions of prior years	**2**	15
Decrease for payments and settlements	**—**	—
Decrease related to tax positions taken in prior years	**(18)**	(19)
Balance at end of year	**$ 19**	$ 35

Each quarter, we review the amount of unrecognized tax benefits recorded in accordance with the applicable accounting guidance. Any adjustment to unrecognized tax benefits is recorded in income tax expense. The amount of unrecognized tax benefits that, if recognized, would affect our effective tax rate was $19 million at December 31, 2019, and $35 million at December 31, 2018. We do not currently anticipate that the amount of unrecognized tax benefits will significantly change over the next 12 months.

As permitted under the applicable accounting guidance, it is our policy to record interest and penalties related to unrecognized tax benefits in income tax expense. We recorded net interest benefit of $.9 million, $.7 million, and $1.3 million in 2019, 2018, and 2017, respectively. We did not recover any state tax penalties in 2019 or 2018. We recovered state tax penalties of $1 million in 2017. At December 31, 2019, we had an accrued interest payable of $2 million, compared to $3 million at December 31, 2018. There was no liability for accrued state tax penalties at December 31, 2019, and December 31, 2018.

The amount of unrecognized tax benefits to be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss or a tax credit carryforward if certain criteria are met at December 31, 2019, and December 31, 2018, are $15.9 million and $14.3 million, respectively.

We file federal income tax returns, as well as returns in various state and foreign jurisdictions. We are subject to income tax examination by the IRS for the tax years 2013 and forward. Currently, we are under IRS audit for the tax years 2013 and 2014. We are not subject to income tax examinations by other tax authorities for years prior to 2009.

Pre-1988 Bank Reserves acquired in a business combination

Retained earnings of KeyBank included approximately $92 million of allocated bad debt deductions for which no income taxes have been recorded. Under current federal law, these reserves are subject to recapture into taxable income if KeyBank, or any successor, fails to maintain its bank status under the Internal Revenue Code or makes non-dividend distributions or distributions greater than its accumulated earnings and profits. No deferred tax liability has been established as these events are not expected to occur in the foreseeable future.

15. Acquisitions, Divestiture, and Discontinued Operations

Acquisitions

Laurel Road Digital Lending Business. On April 3, 2019, KeyBank acquired Laurel Road's digital lending business from Laurel Road Bank. Laurel Road Bank's three bank branches located in southeast Connecticut were not part of this transaction. Through the acquisition, KeyBank expects to enhance its digital capabilities with state-of-the-art, customer-centric technology and to leverage Laurel Road's proven ability to attract and serve professional millennial clients. The acquisition is accounted for as a business combination. During the second quarter of 2019, we recognized provisional identifiable intangible assets with an estimated fair value of $37 million. We also recognized provisional goodwill of $148 million in connection with this acquisition. These fair value estimates represent our best estimate of fair value and are expected to be finalized over a period of up to one year from the acquisition date.

Divestitures

Key Insurance & Benefits Services, Inc. On May 4, 2018, we completed the sale of KIBS to USI Insurance Services. We acquired KIBS as a part of the 2016 merger with First Niagara. At the close of the sale to USI Insurance Services, we recognized a $73 million net gain on sale. In the third quarter of 2018, we recognized an additional $5 million gain upon the finalization of the net working capital.

Discontinued operations

Discontinued operations includes our government-guaranteed and private education lending business. At December 31, 2019, and December 31, 2018, approximately $865 million and $1.1 billion, respectively, of education loans are included in discontinued assets on the consolidated balance sheets. Net interest income after provision for credit losses for this business is not material and is included in income (loss) from discontinued operations, net of taxes on the consolidated statements of income.

16. Securities Financing Activities

The following table summarizes our securities financing agreements at December 31, 2019, and December 31, 2018:

	December 31, 2019				December 31, 2018			
in millions	Gross Amount Presented in Balance Sheet	Netting Adjustments [(a)]	Collateral [(b)]	Net Amounts	Gross Amount Presented in Balance Sheet	Netting Adjustments [(a)]	Collateral [(b)]	Net Amounts
Offsetting of financial assets:								
Reverse repurchase agreements	$ 5	$ (5)	$ —	—	$ 14	$ (14)	—	—
Total	$ 5	$ (5)	$ —	—	$ 14	$ (14)	—	—
Offsetting of financial liabilities:								
Repurchase agreements [(c)]	$ 187	$ (7)	$ (180)	—	$ 319	$ (14)	$ (305)	—
Total	$ 187	$ (7)	$ (180)	—	$ 319	$ (14)	$ (305)	—

(a) Netting adjustments take into account the impact of master netting agreements that allow us to settle with a single counterparty on a net basis.
(b) These adjustments take into account the impact of bilateral collateral agreements that allow us to offset the net positions with the related collateral. The application of collateral cannot reduce the net position below zero. Therefore, excess collateral, if any, is not reflected above.
(c) Repurchase agreements are collateralized by mortgaged-backed agency securities and are contracted on an overnight or continuous basis.

As of December 31, 2019, the carrying amount of assets pledged as collateral against repurchase agreements totaled $204 million. Assets pledged as collateral are reported in “available for sale” and “held-to-maturity” securities on our balance sheet. At December 31, 2019, the liabilities associated with collateral pledged were solely comprised of customer sweep financing activity and had a carrying value of $180 million. The collateral pledged under customer sweep repurchase agreements is posted to a third-party custodian and cannot be sold or repledged by the secured party. The risk related to a decline in the market value of collateral pledged is minimal given the collateral's high credit quality and the overnight duration of the repurchase agreements.

Like other financing transactions, securities financing agreements contain an element of credit risk. To mitigate and manage credit risk exposure, we generally enter into master netting agreements and other collateral arrangements that give us the right, in the event of default, to liquidate collateral held and to offset receivables and payables with the same counterparty. Additionally, we establish and monitor limits on our counterparty credit risk exposure by product type. For the reverse repurchase agreements, we monitor the value of the underlying securities we received from counterparties and either request additional collateral or return a portion of the collateral based on the value of those securities. We generally hold collateral in the form of highly rated securities issued by the U.S. Treasury and fixed income securities. In addition, we may need to provide collateral to counterparties under our repurchase agreements. With the exception of collateral pledged against customer sweep repurchase agreements, the collateral we pledge and receive can generally be sold or repledged by the secured parties.

17. Stock-Based Compensation

We maintain several stock-based compensation plans, which are described below. Total compensation expense for these plans was $96 million for 2019, $99 million for 2018, and $104 million for 2017. The total income tax benefit recognized in the income statement for these plans was $23 million for 2019, $23 million for 2018, and $39 million for 2017.

Our compensation plans allow us to grant stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, or other awards which may be denominated or payable in or valued by reference to our Common Shares or other factors, discounted stock purchases, and deferred compensation to eligible employees and directors. At December 31, 2019, we had 59,991,178 Common Shares available for future grant under our compensation plans. In accordance with a resolution adopted by the Compensation and Organization Committee of KeyCorp’s Board of Directors, we may not grant options to purchase Common Shares, restricted stock or other shares under any long-term compensation plan in an aggregate amount that exceeds 6% of our outstanding Common Shares in any rolling three-year period.

Stock Options

Stock options granted to employees generally become exercisable at the rate of 25% per year. No option granted by KeyCorp will be exercisable less than one year after, or expire later than ten years from, the grant date. The exercise price is the closing price of our Common Shares on the grant date (or the prior business day if the grant date is not a business day).

We determine the fair value of options granted using the Black-Scholes option-pricing model. This model was originally developed to determine the fair value of exchange-traded equity options, which (unlike employee stock options) have no vesting period or transferability restrictions. Because of these differences, the Black-Scholes model does not precisely value an employee stock option, but it is commonly used for this purpose. The model assumes that the estimated fair value of an option is amortized as compensation expense over the option’s vesting period.

The Black-Scholes model requires several assumptions, which we developed and update based on historical trends and current market observations. Our determination of the fair value of options is only as accurate as the underlying assumptions. The assumptions pertaining to options issued during 2019, 2018, and 2017 are shown in the following table.

Year ended December 31,	**2019**	**2018**	**2017**
Average option life	**6.5 years**	6.5 years	6.0 years
Future dividend yield	**3.88%**	2.28%	1.79%
Historical share price volatility	**.266**	.282	.287
Weighted-average risk-free interest rate	**2.5%**	2.8%	2.1%

In 2019, shareholders approved the 2019 Equity Compensation Plan, under which 71,600,000 shares may be issued as equity awards. The Compensation and Organization Committee has authority to approve all stock option grants but may delegate some of its authority to grant awards from time to time. The committee has delegated to our Chief Executive Officer the authority to grant equity awards, including stock options, to any employee who is not designated an “officer” for purposes of Section 16 of the Exchange Act. No more than 3,000,000 Common Shares may be issued under this authority.

The following table summarizes activity, pricing and other information for our stock options for the year ended December 31, 2019:

	Number of Options	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Life	Aggregate Intrinsic Value[(a)]
Outstanding at December 31, 2018	8,123,844	$ 11.92	5.3 years	$ 31
Granted	659,602	17.51		
Exercised	(2,039,208)	9.07		
Lapsed or canceled	(58,430)	14.94		
Outstanding at December 31, 2019	**6,685,808**	**$ 13.32**	**5.2**	**47**
Expected to vest	1,996,076	16.42	7.3	8
Exercisable at December 31, 2019	**4,602,472**	**$ 11.89**	**4.3**	**$ 39**

(a) The intrinsic value of a stock option is the amount by which the fair value of the underlying stock exceeds the exercise price of the option.

The weighted-average grant-date fair value of options was $3.07 for options granted during 2019, $5.12 for options granted during 2018, and $4.60 for options granted during 2017. Stock option exercises numbered 2,039,208 in 2019, 1,960,444 in 2018, and 3,755,177 in 2017. The aggregate intrinsic value of exercised options was $18 million for 2019, $21 million for 2018, and $31 million for 2017. As of December 31, 2019, unrecognized compensation cost related to nonvested options under the plans totaled $2 million. We expect to recognize this cost over a weighted-average period of 2.0 years.

Cash received from options exercised was $18 million, $20 million, and $25 million in 2019, 2018, and 2017, respectively. The actual tax benefit realized for the tax deductions from options exercised totaled $1 million for 2019, $1 million for 2018, and $4 million for 2017.

Long-Term Incentive Compensation Program

Our Long-Term Incentive Compensation Program (the “Program”) rewards senior executives critical to our long-term financial success. Awards are granted annually in a variety of forms:

- deferred cash payments that generally vest and are payable at the rate of 25% per year;
- time-lapsed (service condition) restricted stock units payable in stock, which generally vest at the rate of 25% per year;
- performance units payable in stock, which vest at the end of the three-year performance cycle and will not vest unless Key attains defined performance levels and the service condition is met; and
- performance units payable in cash, which vest at the end of the three-year performance cycle and will not vest unless Key attains defined performance levels and the service condition is met.

During 2019, the total of performance units vested that were payable in stock and cash numbered 855,233 and 1,139,582, respectively. The total fair value of the performance units vested during 2019 that were payable in stock and cash was $9 million and $20 million, respectively. During 2018, the performance units vested that were payable in stock and cash numbered 508,799 and 561,313, respectively. The total fair value of the performance units vested during 2018 that were payable in stock and cash was $7 million and $12 million, respectively.

The following table summarizes activity and pricing information for the nonvested shares in the Program for the year ended December 31, 2019.

	Vesting Contingent on Service Conditions		Vesting Contingent on Performance and Service Conditions - Payable in Stock		Vesting Contingent on Performance and Service Conditions - Payable in Cash	
	Number of Nonvested Shares	Weighted-Average Grant-Date Fair Value	Number of Nonvested Shares	Weighted-Average Grant-Date Fair Value	Number of Nonvested Shares	Weighted-Average Grant-Date Fair Value
Outstanding at December 31, 2018	9,574,950	$ 16.84	1,294,403	$ 13.43	$ 3,245,051	$ 19.29
Granted	5,193,227	17.51	57,584	17.51	1,872,519	20.33
Vested	(3,946,285)	15.27	(855,233)	10.49	(1,139,582)	17.51
Forfeited	(525,498)	17.94	(5,565)	18.96	(78,104)	16.80
Outstanding at December 31, 2019	**10,296,394**	**$ 17.73**	**491,189**	**$ 18.87**	**$ 3,899,884**	**$ 20.37**

The compensation cost of time-lapsed and performance-based restricted stock or unit awards granted under the Program is calculated using the closing trading price of our Common Shares on the grant date (or the prior business day if the grant date is not a business day).

Unlike time-lapsed and performance-based restricted stock or units, we do not pay dividends during the vesting period for performance shares or units that may become payable in excess of targeted performance.

The weighted-average grant-date fair value of awards granted under the Program was $18.25 during 2019, $19.28 during 2018, and $19.82 during 2017. As of December 31, 2019, unrecognized compensation cost related to nonvested shares under the Program totaled $87 million. We expect to recognize this cost over a weighted-average period of 2.3 years. The total fair value of shares vested was $89 million in 2019, $93 million in 2018, and $76 million in 2017.

Deferred Compensation and Other Restricted Stock Awards

Our deferred compensation arrangements include voluntary and mandatory deferral programs for Common Shares awarded to certain employees and directors. Mandatory deferred incentive awards vest at the rate of 25% per year beginning one year after the deferral date. Deferrals under the voluntary programs are immediately vested.

We also may grant, upon approval by the Compensation and Organization Committee (or our Chief Executive Officer with respect to their delegated authority), other time-lapsed restricted stock or unit awards under various programs to recognize outstanding performance.

The following table summarizes activity and pricing information for the nonvested shares granted under our deferred compensation plans and these other restricted stock or unit award programs for the year ended December 31, 2019.

	Number of Nonvested Shares	Weighted-Average Grant-Date Fair Value
Outstanding at December 31, 2018	3,279,817	$ 17.36
Granted	997,217	17.57
Dividend equivalents	19	17.07
Vested	(1,133,600)	16.60
Forfeited	(105,489)	18.61
Outstanding at December 31, 2019	**3,037,964**	**$ 17.67**

The weighted-average grant-date fair value of awards granted was $17.57 during 2019, $20.77 during 2018, and $18.55 during 2017. As of December 31, 2019, unrecognized compensation cost related to nonvested shares granted under our deferred compensation plans and the other restricted stock or unit award programs totaled $17 million. We expect to recognize this cost over a weighted-average period of 4.0 years. The total fair value of shares vested was $19 million in 2019, $22 million in 2018, and $21 million in 2017. Dividend equivalents presented in the preceding table represent the value of dividends accumulated during the vesting period.

Discounted Stock Purchase Plan

Our Discounted Stock Purchase Plan provides employees the opportunity to purchase our Common Shares at a 10% discount through payroll deductions or cash payments. Purchases are limited to $10,000 in any month and $50,000 in any calendar year, and are immediately vested. To accommodate employee purchases, we issue treasury shares on or around the fifteenth day of the month following the month employee payments are received. We issued 327,243 Common Shares at a weighted-average cost to employees of $15.73 during 2019, 327,435 Common Shares at a weighted-average cost to employees of $17.48 during 2018, and 257,738 Common Shares at a weighted-average cost to employees of $16.61 during 2017.

Information pertaining to our method of accounting for stock-based compensation is included in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Stock-Based Compensation.”

18. Employee Benefits

Pension Plans

Effective December 31, 2009, we amended our cash balance pension plan and other defined benefit plans to freeze all benefit accruals and close the plans to new employees. We will continue to credit participants' existing account balances for interest until they receive their plan benefits. We changed certain pension plan assumptions after freezing the plans. As part of the acquisition of First Niagara, Key also obtained two frozen defined benefit plans sponsored by First Niagara, both of which provide benefits based upon length of service and compensation levels. Effective September 30, 2016, the two First Niagara plans merged into another defined benefit plan maintained by Key to form the KeyCorp Consolidated Cash Balance Plan. Effective December 31, 2016, our original cash balance pension plan merged into the KeyCorp Consolidated Cash Balance Plan.

Pre-tax AOCI not yet recognized as net pension cost was $471 million at December 31, 2019, and $511 million at December 31, 2018, consisting entirely of net unrecognized losses.

During 2019 and 2018, lump sum payments made under certain pension plans triggered settlement accounting. In accordance with the applicable accounting guidance for defined benefit plans, we performed a remeasurement of the affected plans in conjunction with the settlement and recognized the settlement loss as reflected in the following table.

The components of net pension cost and the amount recognized in OCI for all funded and unfunded plans are as follows:

Year ended December 31, *in millions*	**2019**	2018	2017
Interest cost on PBO	**$ 46**	$ 41	$ 48
Expected return on plan assets	**(48)**	(53)	(68)
Amortization of losses	**13**	17	15
Settlement loss	**18**	17	—
Net pension cost	**$ 29**	$ 22	$ (5)
Other changes in plan assets and benefit obligations recognized in OCI:			
Net (gain) loss	**$ (8)**	$ 20	$ (10)
Amortization of gains	**(31)**	(33)	(15)
Total recognized in comprehensive income	**$ (39)**	$ (13)	$ (25)
Total recognized in net pension cost and comprehensive income	**$ (10)**	$ 9	$ (30)

The information related to our pension plans presented in the following tables is based on current actuarial reports using measurement dates of December 31, 2019, and December 31, 2018.

The following table summarizes changes in the PBO related to our pension plans. Actuarial losses in 2019 are primarily a result of a change in the discount rate assumption.

Year ended December 31, *in millions*	**2019**	2018
PBO at beginning of year	**$ 1,201**	$ 1,323
Interest cost	**46**	41
Actuarial losses (gains)	**91**	(66)
Benefit payments	**(105)**	(97)
PBO at end of year	**$ 1,233**	$ 1,201

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The following table summarizes changes in the FVA.

Year ended December 31, *in millions*	2019	2018
FVA at beginning of year	$ 1,046	$ 1,163
Actual return on plan assets	147	(34)
Employer contributions	14	14
Benefit payments	(105)	(97)
FVA at end of year	$ 1,102	$ 1,046

The following table summarizes the funded status of the pension plans, which equals the amounts recognized in the balance sheets at December 31, 2019, and December 31, 2018.

December 31, *in millions*	2019	2018
Funded status [(a)]	$ (131)	$ (155)
Net prepaid pension cost recognized consists of:		
Noncurrent assets	$ 48	17
Current liabilities	(14)	$ (15)
Noncurrent liabilities	(165)	(157)
Net prepaid pension cost recognized [(b)]	$ (131)	$ (155)

(a) The shortage of the FVA under the PBO.
(b) Represents the accrued benefit liability of the pension plans.

At December 31, 2019, our primary qualified cash balance pension plan was sufficiently funded under the requirements of ERISA. Consequently, we are not required to make a minimum contribution to that plan in 2020. We also do not expect to make any significant discretionary contributions during 2020.

At December 31, 2019, we expect to pay the benefits from all funded and unfunded pension plans as follows: 2020 — $94 million; 2021— $93 million; 2022 — $91 million; 2023 — $90 million; 2024 — $88 million and $394 million in the aggregate from 2025 through 2029.

The ABO for all of our pension plans was $1.2 billion at December 31, 2019, and $1.2 billion at December 31, 2018. As indicated in the table below, collectively our plans had an ABO in excess of plan assets as follows:

December 31,	2019		2018	
in millions	Cash Balance Pension Plan	Other Defined Benefit Plans	Cash Balance Pension Plan	Other Defined Benefit Plans
PBO	$ 1,054	$ 179	$ 1,029	$ 172
ABO	1,054	179	1,029	172
Fair value of plan assets	1,102	—	1,046	—

To determine the actuarial present value of benefit obligations, we assumed the following weighted-average rates.

December 31,	2019	2018
Discount rate	2.89%	4.00%
Compensation increase rate	N/A	N/A
Weighted-average interest crediting rate	2.39%	3.02%

To determine net pension cost, we assumed the following weighted-average rates.

Year ended December 31,	2019	2018	2017
Discount rate	4.00%	3.25%	3.75%
Compensation increase rate	N/A	N/A	N/A
Expected return on plan assets	4.50	4.75	6.00

We estimate that we will recognize $13 million in net pension cost for 2020, compared to net pension cost of $29 million in 2019 and $22 million for 2018. A settlement loss was recorded in both 2019 and 2018 but not in 2017.

We estimate that a 25 basis point increase or decrease in the expected return on plan assets would change our net pension cost for 2020 by approximately $3 million. Pension cost also is affected by an assumed discount rate. We estimate that a 25 basis point change in the assumed discount rate would change net pension cost for 2020 by approximately $2 million.

The expected return on plan assets is determined by considering a number of factors, the most significant of which are:

- Our expectations for returns on plan assets over the long term, weighted for the investment mix of the assets. These expectations consider, among other factors, historical capital market returns of equity, fixed income, convertible, and other securities, and forecasted returns that are modeled under various economic scenarios.
- Historical returns on our plan assets. Based on an annual reassessment of current and expected future capital market returns, our expected return on plan assets was 4.5% for 2019, 4.75% for 2018 and 6% for 2017. We deemed a rate of 3.75% to be appropriate in estimating 2019 pension cost.

The investment objectives of the pension fund are developed to reflect the characteristics of the plan, such as pension formulas, cash lump sum distribution features, and the liability profiles of the plan's participants. An executive oversight committee reviews the plan's investment performance at least quarterly, and compares performance against appropriate market indices. The pension fund's investment objectives are to balance total return objectives with a continued management of plan liabilities, and to minimize the mismatch between assets and liabilities. These objectives are being implemented through liability driven investing and the adoption of a de-risking glide path. The following table shows the asset target allocations prescribed by the pension fund's investment policies based on the plan's funded status at December 31, 2019.

Asset Class	Target Allocation 2019
Equity securities:	
U.S.	4%
International	2
Fixed income securities	87
Real assets	4
Other assets	3
Total	100%

Equity securities include common stocks of domestic and foreign companies, as well as foreign company stocks traded as American Depositary Shares on U.S. stock exchanges. Debt securities include investments in domestic- and foreign-issued corporate bonds, U.S. government and agency bonds, international government bonds, and mutual funds. Real assets include an investment in a diversified real asset strategy separate account designed to provide exposure to the three core real assets: Treasury Inflation-Protected Securities, commodities, and real estate. Other assets include investments in a multi-strategy investment fund and a limited partnership.

Although the pension funds' investment policies conditionally permit the use of derivative contracts, we have not entered into any such contracts, and we do not expect to employ such contracts in the future.

The valuation methodologies used to measure the fair value of pension plan assets vary depending on the type of asset, as described below. For an explanation of the fair value hierarchy, see Note 1 ("Summary of Significant Accounting Policies") under the heading "Fair Value Measurements."

Equity securities. Equity securities traded on securities exchanges are valued at the closing price on the exchange or system where the security is principally traded. These securities are classified as Level 1 since quoted prices for identical securities in active markets are available.

Debt securities. Substantially all debt securities are investment grade and include domestic- and foreign-issued corporate bonds and U.S. government and agency bonds. These securities are valued using evaluated prices based on observable inputs, such as dealer quotes, available trade information, spreads, bids and offers, prepayment speeds, U.S. Treasury curves, and interest rate movements. Debt securities are classified as Level 2.

Mutual funds. Exchange-traded mutual funds listed or traded on securities exchanges are valued at the closing price on the exchange or system where the security is principally traded. These securities are classified as Level 1 because quoted prices for identical securities in active markets are available.

Collective investment funds. Investments in collective investment funds are valued using the net asset value practical expedient and are not classified within the fair value hierarchy. Fair value is determined based on Key's proportionate share of total net assets in the fund.

Insurance investment contracts and pooled separate accounts. Deposits under insurance investment contracts and pooled separate accounts with insurance companies do not have readily determinable fair values and are valued using a methodology that is consistent with accounting guidance that allows the plan to estimate fair value based upon net asset value per share (or its equivalent, such as member units or an ownership in partners' capital to which a proportionate share of net assets is attributed); thus, these investments are not classified within the fair value hierarchy.

Other assets. Other assets include an investment in a multi-strategy investment fund and an investment in a limited partnership. These investments do not have readily determinable fair values and are valued using a methodology consistent with accounting guidance that allows the plan to estimate fair value based upon net asset value per share (or its equivalent, such as member units or an ownership in partners' capital to which a proportionate share of net assets is attributed); thus, these investments are not classified within the fair value hierarchy.

The following tables show the fair values of our pension plan assets by asset class at December 31, 2019, and December 31, 2018.

	December 31, 2019			
in millions	Level 1	Level 2	Level 3	Total
ASSET CLASS				
Equity securities:				
Common — U.S.	$ 8	—	—	$ 8
Preferred — U.S.	3	—	—	3
Debt securities:				
Corporate bonds — U.S.	—	$ 155	—	155
Corporate bonds — International	—	72	—	72
Government and agency bonds — U.S.	—	190	—	190
Government bonds — International	—	2	—	2
State and municipal bonds	—	27	—	27
Mutual funds:				
Equity — International	2	—	—	2
Collective investment funds (measured at NAV) [(a)]	—	—	—	584
Insurance investment contracts and pooled separate accounts (measured at NAV) [(a)]	—	—	—	16
Other assets (measured at NAV) [(a)]	—	—	—	43
Total net assets at fair value	$ 13	$ 446	—	$ 1,102

(a) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the fair value of plan assets presented elsewhere within this footnote.

	December 31, 2018			
in millions	Level 1	Level 2	Level 3	Total
ASSET CLASS				
Equity securities:				
Common — U.S.	6	—	—	6
Common — International	—	—	—	—
Preferred — U.S.	3	—	—	3
Debt securities:				
Corporate bonds — U.S.	—	$ 157	—	157
Corporate bonds — International	—	65	—	65
Government and agency bonds — U.S.	—	180	—	180
Government bonds — International	—	2	—	2
State and municipal bonds	—	28	—	28
Mutual funds:				
Equity — International	1	—	—	1
Collective investment funds (measured at NAV) [(a)]	—	—	—	546
Insurance investment contracts and pooled separate accounts (measured at NAV) [(a)]	—	—	—	16
Other assets (measured at NAV) [(a)]	—	—	—	42
Total net assets at fair value	$ 10	$ 432	—	$ 1,046

(a) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the fair value of plan assets presented elsewhere within this footnote.

Other Postretirement Benefit Plans

We sponsor a retiree healthcare plan in which all employees age 55 with five years of service (or employees age 50 with 15 years of service who are terminated under conditions that entitle them to a severance benefit) are eligible to participate. Participant contributions are adjusted annually. Key may provide a subsidy toward the cost of coverage for certain employees hired before 2001 with a minimum of 15 years of service at the time of termination. We use a separate VEBA trust to fund the retiree healthcare plan. Effective November 29, 2016, an unfunded retiree welfare plan previously sponsored by First Niagara merged into our current retiree healthcare plan.

The components of pre-tax AOCI not yet recognized as net postretirement benefit cost are shown below.

December 31, *in millions*	**2019**	**2018**
Net unrecognized losses (gains)	**$ (10)**	$ (12)
Net unrecognized prior service credit	**(17)**	—
Total unrecognized AOCI	**$ (27)**	$ (12)

The components of net postretirement benefit cost and the amount recognized in OCI for all funded and unfunded plans are as follows:

December 31, *in millions*	**2019**	**2018**	**2017**
Service cost of benefits earned	**$ 1**	$ 1	$ 1
Interest cost on APBO	**2**	2	3
Expected return on plan assets	**(2)**	(2)	(2)
Amortization of prior service credit	**—**	(1)	(1)
Amortization of gains	**(1)**	(1)	—
Net postretirement benefit	**—**	(1)	1
Other changes in plan assets and benefit obligations recognized in OCI:			
Net (gain) loss	**$ 1**	$ 1	$ (4)
Amortization of prior service credit	**1**	1	1
Amortization of losses	**—**	—	—
Total recognized in comprehensive income	**$ 2**	$ 2	$ (3)
Total recognized in net postretirement benefit cost and comprehensive income	**$ 2**	$ 1	$ (2)

The information related to our postretirement benefit plans presented in the following tables is based on current actuarial reports using measurement dates of December 31, 2019, and December 31, 2018.

The following table summarizes changes in the APBO. Actuarial losses are a result of asset performance.

Year ended December 31, *in millions*	**2019**	**2018**
APBO at beginning of year	**$ 63**	$ 69
Service cost	**1**	1
Interest cost	**2**	2
Plan participants' contributions	**1**	1
Actuarial losses (gains)	**10**	(6)
Benefit payments	**(8)**	(4)
APBO at end of year	**$ 52**	$ 63

The following table summarizes changes in FVA.

Year ended December 31, *in millions*	**2019**	**2018**
FVA at beginning of year	**$ 47**	$ 52
Employer contributions	**—**	—
Plan participants' contributions	**1**	1
Benefit payments	**(8)**	(4)
Actual return on plan assets	**12**	(2)
FVA at end of year	**$ 52**	$ 47

The following table summarizes the funded status of the postretirement plans, which corresponds to the amounts recognized in the balance sheets at December 31, 2019, and December 31, 2018.

December 31, *in millions*	**2019**	**2018**
Funded status [(a)]	—	$ (17)
Accrued postretirement benefit cost recognized [(b)]	—	(17)

(a) The shortage of the FVA under the APBO.
(b) Consists entirely of noncurrent liabilities.

There are no regulations that require contributions to the VEBA trust that funds our retiree healthcare plan, so there is no minimum funding requirement. We are permitted to make discretionary contributions to the VEBA trust, subject to certain IRS restrictions and limitations. We anticipate that our discretionary contributions in 2020, if any, will be minimal.

At December 31, 2019, we expect to pay the benefits from other postretirement plans as follows: 2020 — $7 million; 2021 — $7 million; 2022 — $6 million; 2023 — $5 million; 2024 — $5 million; and $24 million in the aggregate from 2024 through 2028.

To determine the APBO, we assumed discount rates of 4.5% at December 31, 2019, and 4% at December 31, 2018.

To determine net postretirement benefit cost, we assumed the following weighted-average rates.

Year ended December 31,	2019	2018	2017
Discount rate	**4.50%**	3.50%	3.75%
Expected return on plan assets	**4.50**	4.50	4.50

The realized net investment income for the postretirement healthcare plan VEBA trust is subject to federal income taxes, which are reflected in the weighted-average expected return on plan assets shown above.

Assumed healthcare cost trend rates do not have a material impact on net postretirement benefit cost or obligations since the postretirement plan has cost-sharing provisions and benefit limitations.

We do not expect to recognize a credit or an expense in net postretirement benefit cost for 2020. We recognized a credit of less than $1 million in 2019 and 2018.

We estimate the expected returns on plan assets for the VEBA trust much the same way we estimate returns on our pension funds. The primary investment objectives of the VEBA trust are to obtain a market rate of return, take into consideration the safety and/or risk of the investment, and to diversify the portfolio in order to satisfy the trust's anticipated liquidity requirements. The following table shows the asset target allocations prescribed by the trust's investment policy.

Asset Class	Target Allocation 2019
Equity securities	80%
Fixed income securities	20
Cash equivalents	—
Total	100%

Investments consist of mutual funds and collective investment funds that invest in underlying assets in accordance with the target asset allocations shown above. Exchange-traded mutual funds are valued using quoted prices and, therefore, are classified as Level 1. Investments in collective investment funds are valued using the Net Asset Value practical expedient and are not classified within the fair value hierarchy.

The following tables show the fair values of our postretirement plan assets by asset class at December 31, 2019, and December 31, 2018.

in millions	December 31, 2019 Level 1	Level 2	Level 3	Total
ASSET CLASS				
Mutual funds:				
Equity — U.S.	**$ 22**	**—**	**—**	**$ 22**
Equity — International	**9**	**—**	**—**	**9**
Fixed income — U.S.	**7**	**—**	**—**	**7**
Collective investment funds:				
Equity — U.S.[(a)]	**—**	**—**	**—**	**12**
Other assets (measured at NAV)[(a)]	**—**	**—**	**—**	**2**
Total net assets at fair value	**$ 38**	**—**	**—**	**$ 52**

(a) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the fair value of plan assets presented elsewhere within this footnote.

in millions	December 31, 2018 Level 1	Level 2	Level 3	Total
ASSET CLASS				
Mutual funds:				
Equity — U.S.	$ 21	—	—	$ 21
Equity — International	8	—	—	8
Fixed income — U.S.	7	—	—	7
Fixed income — International	—	—	—	—
Collective investment funds:				
Equity — U.S. (a)	—	$ —	—	9
Other assets (measured at NAV)	—	—	—	2
Total net assets at fair value	$ 36	$ —	—	$ 47

(a) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the fair value of plan assets presented elsewhere within this footnote.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 introduced a prescription drug benefit under Medicare and prescribes a federal subsidy to sponsors of retiree healthcare benefit plans that offer prescription drug coverage that is “actuarially equivalent” to the benefits under Medicare Part D. Based on our application of the relevant regulatory formula, we determined that the prescription drug coverage related to our retiree healthcare benefit plan is not actuarially equivalent to the Medicare benefit for the vast majority of retirees. For the years ended December 31, 2019, and December 31, 2018, we did not receive federal subsidies.

Employee 401(k) Savings Plan

A substantial number of our employees are covered under a savings plan that is qualified under Section 401(k) of the Internal Revenue Code. The plan permits employees to contribute from 1% to 100% of eligible compensation, with up to 6% being eligible for matching contributions. Commencing January 1, 2010, an automatic enrollment feature was added to the plan for all new employees. The initial default contribution percentage for employees is 2% and will increase by 1% at the beginning of each plan year until the default contribution is 10% for plan years on and after January 1, 2012. The plan also permits us to provide a discretionary annual profit sharing contribution to eligible employees who have at least one year of service. First Niagara employees who joined Key retained their years of services, and those employees that met eligibility requirements under Key’s savings plan have been included. We accrued a 1% contribution for 2019 and made contributions of 2% and 2% for 2018 and 2017, respectively, on eligible compensation for employees eligible on the last business day of the respective plan years. In addition to the discretionary annual profit sharing contribution, in 2017 we accrued a one-time $1,000 contribution per eligible full-time employee and $500 per eligible part-time employee within the 401(k) savings plan. Employees eligible for the additional contribution must have been employed as of December 31, 2017 and have a salary of $100,000 or less. We also maintain a deferred savings plan that provides certain employees with benefits they otherwise would not have been eligible to receive under the qualified plan once their compensation for the plan year reached the IRS contribution limits. Total expense associated with the above plans was $98 million in 2019, $106 million in 2018, and $129 million in 2017.

19. Short-Term Borrowings

Selected financial information pertaining to the components of our short-term borrowings is as follows:

December 31, *dollars in millions*	2019	2018	2017
FEDERAL FUNDS PURCHASED			
Balance at year end	**$ 200**	—	$ 3
Average during the year	**61**	$ 537	128
Maximum month-end balance	**1,000**	3,197	2,331
Weighted-average rate during the year (a)	**2.12%**	1.68%	.72%
Weighted-average rate at December 31 (a)	**1.56**	—	—
SECURITIES SOLD UNDER REPURCHASE AGREEMENTS			
Balance at year end	**$ 187**	$ 319	$ 374
Average during the year	**203**	391	389
Maximum month-end balance	**283**	614	472
Weighted-average rate during the year (a)	**.22%**	.09%	.08%
Weighted-average rate at December 31 (a)	**.09**	.09	.08
OTHER SHORT-TERM BORROWINGS			
Balance at year end	**$ 705**	$ 544	$ 634
Average during the year	**730**	915	1,140
Maximum month-end balance	**847**	1,133	1,242
Weighted-average rate during the year (a)	**2.31%**	2.34%	1.34%
Weighted-average rate at December 31 (a)	**1.99**	2.92	2.01

(a) Rates exclude the effects of interest rate swaps and caps, which modify the repricing characteristics of certain short-term borrowings. For more information about such financial instruments, see Note 8 ("Derivatives and Hedging Activities").

As described below and in Note 20 ("Long-Term Debt"), KeyCorp and KeyBank have a number of programs and facilities that support our short-term financing needs. Certain subsidiaries maintain credit facilities with third parties, which provide alternative sources of funding. KeyCorp is the guarantor of some of the third-party facilities.

Short-term credit facilities. We maintain cash on deposit in our Federal Reserve account, which has reduced our need to obtain funds through various short-term unsecured money market products. This account, which was maintained at $1.0 billion at December 31, 2019, and the unpledged securities in our investment portfolio provide a buffer to address unexpected short-term liquidity needs. We also have secured borrowing facilities at the FHLB and the Federal Reserve Bank of Cleveland to satisfy short-term liquidity requirements. As of December 31, 2019, our unused secured borrowing capacity was $25.2 billion at the Federal Reserve Bank of Cleveland and $8.1 billion at the FHLB.

20. Long-Term Debt

The following table presents the components of our long-term debt, net of unamortized discounts and adjustments related to hedging with derivative financial instruments. We use interest rate swaps and caps, which modify the repricing characteristics of certain long-term debt, to manage interest rate risk. For more information about such financial instruments, see Note 8 (“Derivatives and Hedging Activities”).

December 31, *dollars in millions*	**2019**	2018
Senior medium-term notes due through 2021 [a]	**$ 4,111**	$ 3,278
3.136% Subordinated notes due 2028 [b]	**162**	162
6.875% Subordinated notes due 2029 [b]	**109**	104
7.75% Subordinated notes due 2029 [b]	**141**	135
7.25% Subordinated notes due 2021 [c]	**324**	336
6.75% Senior notes due 2020 [d]	**—**	315
Other subordinated notes [b], [e]	**71**	70
Total parent company	**4,918**	4,400
Senior medium-term notes due through 2039 [f]	**5,874**	7,022
3.18% Senior remarketable notes due 2027 [g]	**222**	212
3.40% Subordinated notes due 2026 [h]	**589**	560
6.95% Subordinated notes due 2028 [h]	**299**	299
3.90% Subordinated notes due 2029 [h]	**371**	—
Secured borrowing due through 2025 [i]	**15**	10
Federal Home Loan Bank advances due through 2038 [j]	**121**	1,130
Investment Fund Financing due through 2052 [k]	**26**	83
Obligations under Capital Leases due through 2032 [l]	**13**	16
Total subsidiaries	**7,530**	9,332
Total long-term debt	**$ 12,448**	$ 13,732

(a) Senior medium-term notes had a weighted-average interest rate of 3.7815% at December 31, 2019, and 4.057% at December 31, 2018. These notes had fixed interest rates at December 31, 2019, and December 31, 2018. These notes may not be redeemed prior to their maturity dates.
(b) See Note 21 (“Trust Preferred Securities Issued by Unconsolidated Subsidiaries”) for a description of these notes.
(c) The First Niagara subordinated debt had a weighted-average interest rate of 7.25% at December 31, 2019, and a weighted-average interest rate of 7.25% at December 31, 2018. These notes may not be redeemed prior to their maturity dates.
(d) The First Niagara senior notes had a weighted-average interest rate of 6.75% at December 31, 2018. On October 21, 2019, KeyCorp redeemed for cash all of the outstanding $300 million aggregate principal amount of its 6.75% Senior Notes due March 19, 2020.
(e) The First Niagara variable rate trust preferred securities had a weighted-average interest rate of 3.42% at December 31, 2019, and 4.20% at December 31, 2018. These notes may be redeemed prior to their maturity dates.
(f) Senior medium-term notes had weighted-average interest rates of 2.595% at December 31, 2019, and 2.593% at December 31, 2018. These notes are a combination of fixed and floating rates. These notes may not be redeemed prior to their maturity dates.
(g) The remarketable senior medium-term notes had a weighted-average interest rate of 3.18% at December 31, 2019, and 3.18% at December 31, 2018. These notes had fixed interest rates at December 31, 2017, and December 31, 2018. These notes may not be redeemed prior to their maturity dates.
(h) These notes are all obligations of KeyBank and may not be redeemed prior to their maturity dates.
(i) The secured borrowing had weighted-average interest rates of 4.445% at December 31, 2019, and 4.455% at December 31, 2018. This borrowing is collateralized by commercial lease financing receivables, and principal reductions are based on the cash payments received from the related receivables. Additional information pertaining to these commercial lease financing receivables is included in Note 4 (“Loan Portfolio”).
(j) Long-term advances from the Federal Home Loan Bank had a weighted-average interest rate of 3.506% at December 31, 2019, and 2.333% at December 31, 2018. These advances, which had fixed interest rates, were secured by real estate loans and securities totaling $121 million at December 31, 2019, and $1.1 billion at December 31, 2018.
(k) Investment Fund Financing had a weighted-average interest rate of 1.63% at December 31, 2019, and 1.85% at December 31, 2018.
(l) These are capital leases acquired in the First Niagara merger with a maturity range from March 2021 through October 2032.

At December 31, 2019, scheduled principal payments on long-term debt were as follows:

in millions	Parent	Subsidiaries	Total
2020	—	$ 1,010	$ 1,010
2021	$ 998	1,265	2,263
2022	1,342	2,365	3,707
2023	—	522	522
2024	—	3	3
All subsequent years	2,578	2,365	4,943

As described below, KeyBank and KeyCorp have a number of programs that support our long-term financing needs.

Global bank note program. On September 29, 2015, KeyBank updated its Global Bank Note Program, authorizing the issuance of up to $20 billion of notes domestically and abroad. Under the program, KeyBank is authorized to issue notes with original maturities of seven days or more for senior notes or five years or more for subordinated notes. Notes may be denominated in U.S. dollars or in foreign currencies. Amounts outstanding under the program and any prior bank note programs are classified as “long-term debt” on the balance sheet.

In 2018, KeyBank issued the following notes under the 2015 Global Bank Note Program: on March 7, 2018, $500 million of 3.375% Senior Bank Notes due March 7, 2023; and on June 13, 2018, $500 million of 3.35% Senior Bank Notes due June 15, 2021.

On September 28, 2018, KeyBank again updated its Bank Note Program authorizing the issuance of up to $20 billion of notes. Under the program, KeyBank is authorized to issue notes with original maturities of seven days or more for senior notes or five years or more for subordinated notes. Notes will be denominated in U.S. dollars. Amounts outstanding under the program and any prior bank note programs are classified as “long-term debt” on the balance sheet.

In 2019, KeyBank issued the following notes under the 2018 Bank Note Program: on February 1, 2019, $600 million of 3.300% Senior Bank Notes due February 1, 2022, and $400 million of Floating Rate Senior Bank Notes due February 1, 2022; and on March 13, 2019, $350 million of 3.900% Subordinated Bank Notes due April 13, 2029.

As of December 31, 2019, $1.4 billion of notes had been issued under the 2018 Bank Note Program, and $18.7 billion remained available for issuance.

KeyCorp shelf registration, including Medium-Term Note Program. KeyCorp has a shelf registration statement on file with the SEC under rules that allow companies to register various types of debt and equity securities without limitations on the aggregate amounts available for issuance. KeyCorp also maintains a Medium-Term Note Program that permits KeyCorp to issue notes with original maturities of nine months or more.

In 2018, KeyCorp issued the following notes under the program: on April 30, 2018, $750 million of 4.10% Senior Notes due April 30, 2028; and on October 29, 2018, $500 million of 4.150% Senior Notes due October 29, 2025.

In 2019, KeyCorp issued the following notes under the program: On September 11, 2019, $750 million of 2.550% Senior Notes due October 1, 2029.

At December 31, 2019, KeyCorp had authorized and available for issuance up to $2.0 billion of additional debt securities under the Medium-Term Note Program. On February 6, 2020, KeyCorp issued $800 million of 2.250% Senior Notes due April 6, 2027, under the Medium-Term Note Program.

Issuances of capital securities or preferred stock by KeyCorp must be approved by the Board and cannot be objected to by the Federal Reserve.

21. Trust Preferred Securities Issued by Unconsolidated Subsidiaries

We own the outstanding common stock of business trusts formed by us that issued corporation-obligated mandatorily redeemable trust preferred securities. The trusts used the proceeds from the issuance of their trust preferred securities and common stock to buy debentures issued by KeyCorp. These debentures are the trusts’ only assets; the interest payments from the debentures finance the distributions paid on the mandatorily redeemable trust preferred securities. The outstanding common stock of these business trusts is recorded in “other investments” on our balance sheet.

We unconditionally guarantee the following payments or distributions on behalf of the trusts:

- required distributions on the trust preferred securities;
- the redemption price when a capital security is redeemed; and
- the amounts due if a trust is liquidated or terminated.

The Regulatory Capital Rules require us to treat our mandatorily redeemable trust preferred securities as Tier 2 capital.

The trust preferred securities, common stock, and related debentures are summarized as follows:

dollars in millions	Trust Preferred Securities, Net of Discount [(a)]	Common Stock	Principal Amount of Debentures, Net of Discount [(b)]	Interest Rate of Trust Preferred Securities and Debentures [(c)]	Maturity of Trust Preferred Securities and Debentures
December 31, 2019					
KeyCorp Capital I	**$ 156**	**$ 6**	**$ 162**	**2.649%**	**2028**
KeyCorp Capital II	**105**	**4**	**109**	**6.875**	**2029**
KeyCorp Capital III	**137**	**4**	**141**	**7.750**	**2029**
HNC Statutory Trust III	**19**	**1**	**20**	**3.310**	**2035**
Willow Grove Statutory Trust I	**19**	**1**	**20**	**3.204**	**2036**
HNC Statutory Trust IV	**16**	**1**	**17**	**3.216**	**2037**
Westbank Capital Trust II	**7**	**—**	**7**	**4.098**	**2034**
Westbank Capital Trust III	**7**	**—**	**7**	**4.098**	**2034**
Total	**$ 466**	**$ 17**	**$ 483**	**5.214%**	—
December 31, 2018	$ 454	$ 17	$ 471	5.447%	—

(a) The trust preferred securities must be redeemed when the related debentures mature, or earlier if provided in the governing indenture. Each issue of trust preferred securities carries an interest rate identical to that of the related debenture. Certain trust preferred securities include debt issuance costs and basis adjustments related to fair value hedges totaling $57 million at December 31, 2019, and $46 million at December 31, 2018. See Note 8 (“Derivatives and Hedging Activities”) for an explanation of fair value hedges.

(b) We have the right to redeem these debentures. If the debentures purchased by KeyCorp Capital I, HNC Statutory Trust III, Willow Grove Statutory Trust I, HNC Statutory Trust IV, Westbank Capital Trust II, or Westbank Capital Trust III are redeemed before they mature, the redemption price will be the principal amount, plus any accrued but unpaid interest. If the debentures purchased by KeyCorp Capital II or KeyCorp Capital III are redeemed before they mature, the redemption price will be the greater of: (i) the principal amount, plus any accrued but unpaid interest, or (ii) the sum of the present values of principal and interest payments discounted at the Treasury Rate (as defined in the applicable indenture), plus 20 basis points for KeyCorp Capital II or 25 basis points for KeyCorp Capital III or 50 basis points in the case of redemption upon either a tax or a capital treatment event for either KeyCorp Capital II or KeyCorp Capital III, plus any accrued but unpaid interest. The principal amount of certain debentures includes debt issuance costs and basis adjustments related to fair value hedges totaling $57 million at December 31, 2019, and $46 million at December 31, 2018. See Note 8 for an explanation of fair value hedges. The principal amount of debentures, net of discounts, is included in “long-term debt” on the balance sheet.

(c) The interest rates for the trust preferred securities issued by KeyCorp Capital II and KeyCorp Capital III are fixed. The trust preferred securities issued by KeyCorp Capital I have a floating interest rate, equal to three-month LIBOR plus 74 basis points, that reprices quarterly. The trust preferred securities issued by HNC Statutory Trust III have a floating interest rate, equal to three-month LIBOR plus 140 basis points, that reprices quarterly. The trust preferred securities issued by Willow Grove Statutory Trust I have a floating interest rate, equal to three-month LIBOR plus 131 basis points, that reprices quarterly. The trust preferred securities issued by HNC Statutory Trust IV have a floating interest rate, equal to three-month LIBOR plus 128 basis points, that reprices quarterly. The trust preferred securities issued by Westbank Capital Trust II and Westbank Capital Trust III each have a floating interest rate, equal to three-month LIBOR plus 219 basis points, that reprices quarterly. The total interest rates are weighted-average rates.

22. Commitments, Contingent Liabilities, and Guarantees

Commitments to Extend Credit or Funding

Loan commitments provide for financing on predetermined terms as long as the client continues to meet specified criteria. These agreements generally carry variable rates of interest and have fixed expiration dates or termination clauses. We typically charge a fee for our loan commitments. Since a commitment may expire without resulting in a loan, our aggregate outstanding commitments may significantly exceed our eventual cash outlay.

Loan commitments involve credit risk not reflected on our balance sheet. We mitigate exposure to credit risk with internal controls that guide how we review and approve applications for credit, establish credit limits and, when necessary, demand collateral. In particular, we evaluate the creditworthiness of each prospective borrower on a case-by-case basis and, when appropriate, adjust the allowance for credit losses on lending-related commitments. Additional information pertaining to this allowance is included in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Liability for Credit Losses on Lending-Related Commitments,” and in Note 5 (“Asset Quality”).

We also provide financial support to private equity investments, including existing direct portfolio companies and indirect private equity funds, to satisfy unfunded commitments. These unfunded commitments are not recorded on our balance sheet. Additional information on principal investing commitments is provided in Note 6 (“Fair Value Measurements”). Other unfunded equity investment commitments at December 31, 2019, and December 31, 2018, related to tax credit investments and were primarily attributable to LIHTC investments. Unfunded tax credit investment commitments are recorded on our balance sheet in “other liabilities.” Additional information on LIHTC commitments is provided in Note 13 (“Variable Interest Entities”).

The following table shows the remaining contractual amount of each class of commitment related to extending credit or funding principal investments as of December 31, 2019, and December 31, 2018. For loan commitments and commercial letters of credit, this amount represents our maximum possible accounting loss on the unused commitment if the borrower were to draw upon the full amount of the commitment and subsequently default on payment for the total amount of the then outstanding loan.

December 31, *in millions*	2019	2018
Loan commitments:		
Commercial and other	**$ 45,323**	$ 42,653
Commercial real estate and construction	**2,961**	2,691
Home equity	**9,945**	9,982
Credit cards	**6,560**	6,152
Total loan commitments	**64,789**	61,478
Commercial letters of credit	**91**	86
Purchase card commitments	**729**	621
Principal investing commitments	**21**	26
Tax credit investment commitments	**547**	520
Total loan and other commitments	**$ 66,177**	$ 62,731

Legal Proceedings

Litigation. From time to time, in the ordinary course of business, we and our subsidiaries are subject to various litigation, investigations, and administrative proceedings. Private, civil litigations may range from individual actions involving a single plaintiff to putative class action lawsuits with potentially thousands of class members. Investigations may involve both formal and informal proceedings, by both government agencies and self-regulatory bodies. These matters may involve claims for substantial monetary relief. At times, these matters may present novel claims or legal theories. Due to the complex nature of these various other matters, it may be years before some matters are resolved. While it is impossible to ascertain the ultimate resolution or range of financial liability, based on information presently known to us, we do not believe there is any matter to which we are a party, or involving any of our properties that, individually or in the aggregate, would reasonably be expected to have a material adverse effect on our financial condition. We continually monitor and reassess the potential materiality of these litigation matters. We note, however, that in light of the inherent uncertainty in legal proceedings there can be no assurance that the ultimate resolution will not exceed established reserves. As a result, the outcome of a particular matter, or a combination of matters, may be material to our results of operations for a particular period, depending upon the size of the loss or our income for that particular period.

Guarantees

We are a guarantor in various agreements with third parties. The following table shows the types of guarantees that we had outstanding at December 31, 2019. Information pertaining to the basis for determining the liabilities recorded in connection with these guarantees is included in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Contingencies and Guarantees.”

December 31, 2019 *in millions*	Maximum Potential Undiscounted Future Payments	Liability Recorded
Financial guarantees:		
Standby letters of credit	$ 3,303	$ 72
Recourse agreement with FNMA	4,862	7
Residential mortgage reserve	1,825	7
Written put options [(a)]	2,446	32
Total	$ 12,436	$ 118

(a) The maximum potential undiscounted future payments represent notional amounts of derivatives qualifying as guarantees.

We determine the payment/performance risk associated with each type of guarantee described below based on the probability that we could be required to make the maximum potential undiscounted future payments shown in the preceding table. We use a scale of low (0% to 30% probability of payment), moderate (greater than 30% to 70% probability of payment), or high (greater than 70% probability of payment) to assess the payment/performance risk, and have determined that the payment/performance risk associated with each type of guarantee outstanding at December 31, 2019, is low.

Standby letters of credit. KeyBank issues standby letters of credit to address clients’ financing needs. These instruments obligate us to pay a specified third party when a client fails to repay an outstanding loan or debt instrument or fails to perform some contractual nonfinancial obligation. Any amounts drawn under standby letters of credit are treated as loans to the client; they bear interest (generally at variable rates) and pose the same credit risk to us as a loan. At December 31, 2019, our standby letters of credit had a remaining weighted-average life of 2 years, with remaining actual lives ranging from less than 1 year to as many as 15 years.

Recourse agreement with FNMA. We participate as a lender in the FNMA Delegated Underwriting and Servicing program. FNMA delegates responsibility for originating, underwriting, and servicing mortgages, and we assume a limited portion of the risk of loss during the remaining term on each commercial mortgage loan that we sell to FNMA. We maintain a reserve for such potential losses in an amount that we believe approximates the fair value of our liability. At December 31, 2019, the outstanding commercial mortgage loans in this program had a weighted-average remaining term of 7.7 years, and the unpaid principal balance outstanding of loans sold by us as a participant was $16.5 billion. The maximum potential amount of undiscounted future payments that we could be required to make under this program, as shown in the preceding table, is equal to approximately 30% of the principal balance of loans outstanding at December 31, 2019. If we are required to make a payment, we would have an interest in the collateral underlying the related commercial mortgage loan; any loss we incur could be offset by the amount of any recovery from the collateral.

Residential Mortgage Banking. We often originate and sell residential mortgage loans and retain the servicing rights. Our loan sales activity is generally conducted through loan sales in a secondary market sponsored by FNMA and FHLMC and through the issuance of GNMA mortgage backed securities. Subsequent to the sale of mortgage loans, we do not typically retain any interest in the underlying loans except through our relationship as the servicer of the loans.

As is customary in the mortgage banking industry, we, or banks we have acquired, have made certain representations and warranties related to the sale of residential mortgage loans (including loans sold with servicing rights released) and to the performance of our obligations as servicer. The breach of any such representations or warranties could result in losses for us. Our maximum exposure to loss is equal to the outstanding principal balance of the sold loans; however, any loss would be reduced by any payments received on the loans or through the sale of collateral.

At December 31, 2019, the unpaid principal balance outstanding of loans sold by us was $6.1 billion. The maximum potential amount of undiscounted future payments that we could be required to make under this program, as shown in the preceding table, is equal to approximately 30% of the principal balance of loans outstanding at December 31, 2019.

Our liability for estimated repurchase obligations on loans sold, which is included in other liabilities on our balance sheet, was $7 million at December 31, 2019.

Written put options. In the ordinary course of business, we “write” put options for clients that wish to mitigate their exposure to changes in interest rates and commodity prices. At December 31, 2019, our written put options had an average life of three years. These instruments are considered to be guarantees, as we are required to make payments to the counterparty (the client) based on changes in an underlying variable that is related to an asset, a liability, or an equity security that the client holds. We are obligated to pay the client if the applicable benchmark interest rate or commodity price is above or below a specified level (known as the “strike rate”). These written put options are accounted for as derivatives at fair value, as further discussed in Note 8 (“Derivatives and Hedging Activities”). We mitigate our potential future payment obligations by entering into offsetting positions with third parties.

Written put options where the counterparty is a broker-dealer or bank are accounted for as derivatives at fair value but are not considered guarantees since these counterparties typically do not hold the underlying instruments. In addition, we are a purchaser and seller of credit derivatives, which are further discussed in Note 8.

Default guarantees. Some lines of business participate in guarantees that obligate us to perform if the debtor (typically a client) fails to satisfy all of its payment obligations to third parties. We generally undertake these guarantees for one of two possible reasons: (i) either the risk profile of the debtor should provide an investment return, or (ii) we are supporting our underlying investment in the debtor. We do not hold collateral for the default guarantees. If we were required to make a payment under a guarantee, we would receive a pro rata share should the third party collect some or all of the amounts due from the debtor. At December 31, 2019, we had less than $1 million of default guarantees.

Other Off-Balance Sheet Risk

Other off-balance sheet risk stems from financial instruments that do not meet the definition of a guarantee as specified in the applicable accounting guidance, and from other relationships.

Indemnifications provided in the ordinary course of business. We provide certain indemnifications, primarily through representations and warranties in contracts that we execute in the ordinary course of business in connection with loan and lease sales and other ongoing activities, as well as in connection with purchases and sales of businesses. We maintain reserves, when appropriate, with respect to liability that reasonably could arise as a result of these indemnities.

Intercompany guarantees. KeyCorp, KeyBank, and certain of our affiliates are parties to various guarantees that facilitate the ongoing business activities of other affiliates. These business activities encompass issuing debt, assuming certain lease and insurance obligations, purchasing or issuing investments and securities, and engaging in certain leasing transactions involving clients.

23. Accumulated Other Comprehensive Income

Our changes in AOCI for the years ended December 31, 2019, and December 31, 2018, are as follows:

in millions	Unrealized gains (losses) on securities available for sale	Unrealized gains (losses) on derivative financial instruments	Foreign currency translation adjustment	Net pension and postretirement benefit costs	Total
Balance at December 31, 2017	$ (311)	$ (86)	$ 9	$ (391)	$ (779)
Other comprehensive income before reclassification, net of income taxes	(62)	7	(10)	(15)	(80)
Amounts reclassified from accumulated other comprehensive income, net of income taxes [(a)]	—	29	—	25	54
Amounts reclassified from accumulated other comprehensive income resulting from new federal corporate income tax rate [(b)]	—	—	(13)	—	(13)
Net current-period other comprehensive income, net of income taxes	(62)	36	(23)	10	(39)
Balance at December 31, 2018	$ (373)	$ (50)	$ (14)	$ (381)	$ (818)
Other comprehensive income before reclassification, net of income taxes	**503**	**335**	**3**	**19**	**860**
Amounts reclassified from accumulated other comprehensive income, net of income taxes [(a)]	**(15)**	**(35)**	**11**	**23**	**(16)**
Net current-period other comprehensive income, net of income taxes	**488**	**300**	**14**	**42**	**844**
Balance at December 31, 2019	**$ 115**	**$ 250**	**$ —**	**$ (339)**	**$ 26**

(a) See table below for details about these reclassifications.
(b) See Note 14 ("Income Taxes") for details about the accounting impacts resulting from the TCJ Act.

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Our reclassifications out of AOCI for the years ended December 31, 2019, and December 31, 2018, are as follows:

in millions	Twelve months ended December 31, 2019	2018	Affected Line Item in the Statement Where Net Income is Presented
Unrealized gains (losses) on available for sale securities			
Realized gains	$ 20	—	Other income
	20	—	Income (loss) from continuing operations before income taxes
	5	—	Income taxes
	$ 15	—	Income (loss) from continuing operations
Unrealized gains (losses) on derivative financial instruments			
Interest rate	$ 15	$ (68)	Interest income — Loans
Interest rate	(1)	(2)	Interest expense — Long-term debt
Interest rate	—	2	Investment banking and debt placement fees
Foreign exchange contracts	32	31	Other income
	46	(37)	Income (loss) from continuing operations before income taxes
	11	(8)	Income taxes
	$ 35	$ (29)	Income (loss) from continuing operations
Foreign currency translation adjustment			
	(14)	—	Other income
	(14)	—	Income (loss) from continuing operations before income taxes
	(3)	—	Income taxes
	(11)	—	Income (loss) from continuing operations
Net pension and postretirement benefit costs			
Amortization of losses	$ (13)	$ (17)	Other expense
Settlement loss	(18)	(17)	Other expense
Amortization of prior service credit	—	1	Other expense
	(31)	(33)	Income (loss) from continuing operations before income taxes
	(8)	(8)	Income taxes
	$ (23)	$ (25)	Income (loss) from continuing operations

24. Shareholders' Equity

Comprehensive Capital Plan

As previously reported and as authorized by the Board and pursuant to our 2019 capital plan (which is effective through the second quarter of 2020) submitted to and approved by the Federal Reserve, we have authority to repurchase up to $1.0 billion of our Common Shares. During 2019, we repurchased $379 million of Common Shares under our 2018 capital plan authorization and $489 million under our 2019 capital plan authorization.

Consistent with our 2018 capital plan, the Board declared a quarterly dividend of $.17 per Common Share for the first and second quarters of 2019. The Board declared a quarterly dividend of $.185 per Common Share for the third and fourth quarters of 2019, consistent with our 2019 capital plan. These quarterly dividend payments brought our annual dividend to $.71 per Common Share for 2019.

Preferred Stock

The following table summarizes our preferred stock at December 31, 2019:

Preferred stock series	Amount outstanding (in millions)	Shares authorized and outstanding	Par value	Liquidation preference	Ownership interest per depositary share	Liquidation preference per depositary share	2019 dividends paid per depositary share
Fixed-to-Floating Rate Perpetual Noncumulative Series D	$ 525	21,000	$ 1	$ 25,000	1/25th	$ 1,000	$ 50.00
Fixed-to-Floating Rate Perpetual Noncumulative Series E	500	500,000	1	1,000	1/40th	25	1.531252
Fixed Rate Perpetual							

Noncumulative Series F	425	425,000	1	1,000	1/40th	25	1.412500
Fixed Rate Perpetual Noncumulative Series G	450	450,000	1	1,000	1/40th	25	.882813

Capital Adequacy

KeyCorp and KeyBank (consolidated) must meet specific capital requirements imposed by federal banking regulators. Sanctions for failure to meet applicable capital requirements may include regulatory enforcement actions that restrict dividend payments, require the adoption of remedial measures to increase capital, terminate FDIC deposit insurance, and mandate the appointment of a conservator or receiver in severe cases. In addition, failure to maintain a "well capitalized" status affects how regulators evaluate applications for certain endeavors, including acquisitions, continuation and expansion of existing activities, and commencement of new activities, and could make clients and potential investors less confident. As of December 31, 2019, KeyCorp and KeyBank (consolidated) met all regulatory capital requirements.

KeyBank (consolidated) qualified for the "well capitalized" prompt corrective action capital category at December 31, 2019, because its capital and leverage ratios exceeded the prescribed threshold ratios for that capital category and it was not subject to any written agreement, order, or directive to meet and maintain a specific capital level for any capital measure. Since that date, we believe there has been no change in condition or event that has occurred that would cause the capital category for KeyBank (consolidated) to change.

BHCs are not assigned to any of the five prompt corrective action capital categories applicable to insured depository institutions. If, however, those categories applied to BHCs, we believe that KeyCorp would satisfy the criteria for a "well capitalized" institution at December 31, 2019, and since that date, we believe there has been no change in condition or event that has occurred that would cause such capital category to change.

Because the regulatory capital categories under the prompt corrective action regulations serve a limited supervisory function, investors should not use them as a representation of the overall financial condition or prospects of KeyBank or KeyCorp.

At December 31, 2019, Key and KeyBank (consolidated) had regulatory capital in excess of all current minimum risk-based capital (including all adjustments for market risk) and leverage ratio requirements as shown in the following table.

	Actual		To Meet Minimum Capital Adequacy Requirements		To Qualify as Well Capitalized Under Federal Deposit Insurance Act	
dollars in millions	Amount	Ratio	Amount	Ratio	Amount	Ratio
December 31, 2019						
TOTAL CAPITAL TO NET RISK-WEIGHTED ASSETS						
Key	**$ 16,731**	**12.79%**	**$ 10,469**	**8.00%**	**N/A**	**N/A**
KeyBank (consolidated)	**16,313**	**12.69**	**10,287**	**8.00**	**$ 12,858**	**10.00%**
TIER 1 CAPITAL TO NET RISK-WEIGHTED ASSETS						
Key	**$ 14,207**	**10.86%**	**$ 7,852**	**6.00%**	**N/A**	**N/A**
KeyBank (consolidated)	**14,091**	**10.96**	**7,715**	**6.00**	**$ 7,715**	**6.00%**
TIER 1 CAPITAL TO AVERAGE QUARTERLY TANGIBLE ASSETS						
Key	**$ 14,207**	**9.87%**	**$ 5,756**	**4.00%**	**N/A**	**N/A**
KeyBank (consolidated)	**14,091**	**9.91**	**5,688**	**4.00**	**$ 7,110**	**5.00%**
December 31, 2018						
TOTAL CAPITAL TO NET RISK-WEIGHTED ASSETS						
Key	$ 15,953	12.89%	$ 9,903	8.00%	N/A	N/A
KeyBank (consolidated)	15,432	12.68	9,733	8.00	$ 12,166	10.00%
TIER 1 CAPITAL TO NET RISK-WEIGHTED ASSETS						
Key	$ 13,712	11.08%	$ 7,427	6.00%	N/A	N/A
KeyBank (consolidated)	13,575	11.16	7,300	6.00	$ 7,300	6.00%
TIER 1 CAPITAL TO AVERAGE QUARTERLY TANGIBLE ASSETS						
Key	$ 13,712	9.89%	$ 5,548	4.00%	N/A	N/A
KeyBank (consolidated)	13,575	9.93	5,470	4.00	$ 6,838	5.00%

25. Business Segment Reporting

Key previously reported its results of operations through two reportable business segments, Key Community Bank and Key Corporate Bank. In the first quarter of 2019, Key underwent a company-wide organizational change, resulting in the realignment of its businesses into two reportable business segments, Consumer Bank and Commercial Bank, with the remaining operations that do not meet the criteria for disclosure as a separate

reportable business recorded in Other. The new business segment structure aligns with how management reviews performance and makes decisions by client, segment and business unit. Prior period information was restated to conform to the new business segment structure. Additionally, goodwill was reallocated to the new segments on a relative fair value basis. On March 31, 2019, the Consumer Bank was allocated goodwill in the amount of $1.6 billion and the Commercial Bank was allocated goodwill in the amount of $912 million.

The following is a description of the segments and their primary businesses at December 31, 2019.

Consumer Bank

The Consumer Bank serves individuals and small businesses throughout our 15-state branch footprint by offering a variety of deposit and investment products, personal finance and financial wellness services, lending, mortgage and home equity, student loan refinancing, credit card, treasury services, and business advisory services. The Consumer Bank also purchases retail auto sales contracts via a network of auto dealerships. The auto dealerships finance the sale of automobiles as the initial lender and then assign the contracts to us pursuant to dealer agreements. In addition, wealth management and investment services are offered to assist institutional, non-profit, and high-net-worth clients with their banking, trust, portfolio management, charitable giving, and related needs.

Commercial Bank

The Commercial Bank is an aggregation of our Institutional and Commercial operating segments. The Commercial operating segment is a full-service corporate bank focused principally on serving the needs of middle market clients in seven industry sectors: consumer, energy, healthcare, industrial, public sector, real estate, and technology. The Commercial operating segment is also a significant servicer of commercial mortgage loans and a significant special servicer of CMBS. The Institutional operating segment delivers a broad suite of banking and capital markets products to its clients, including syndicated finance, debt and equity capital markets, commercial payments, equipment finance, commercial mortgage banking, derivatives, foreign exchange, financial advisory, and public finance.

Other

Other includes various corporate treasury activities such as management of our investment securities portfolio, long-term debt, short-term liquidity and funding activities, and balance sheet risk management, our principal investing unit, and various exit portfolios as well as reconciling items, which primarily represent the unallocated portion of nonearning assets of corporate support functions. Charges related to the funding of these assets are part of net interest income and are allocated to the business segments through noninterest expense. Reconciling items also include intercompany eliminations and certain items that are not allocated to the business segments because they do not reflect their normal operations.

The table on the following page shows selected financial data for our major business segments for the years ended December 31, 2019, 2018, and 2017.

The information was derived from the internal financial reporting system that we use to monitor and manage our financial performance. GAAP guides financial accounting, but there is no authoritative guidance for “management accounting” — the way we use our judgment and experience to make reporting decisions. Consequently, the line of business results we report may not be comparable to line of business results presented by other companies.

The selected financial data is based on internal accounting policies designed to compile results on a consistent basis and in a manner that reflects the underlying economics of the businesses. In accordance with our policies:

- Net interest income is determined by assigning a standard cost for funds used or a standard credit for funds provided based on their assumed maturity, prepayment, and/or repricing characteristics.
- Indirect expenses, such as computer servicing costs and corporate overhead, are allocated based on assumptions regarding the extent that each line of business actually uses the services.
- The consolidated provision for credit losses is allocated among the lines of business primarily based on their actual net loan charge-offs, adjusted periodically for loan growth and changes in risk profile. The amount of the consolidated provision is based on the methodology that we use to estimate our consolidated ALLL. This methodology is described in Note 1 (“Summary of Significant Accounting Policies”) under the heading “Allowance for Loan and Lease Losses.”

- Income taxes are allocated based on the 2019 statutory federal income tax rate of 21% and a blended state income tax rate (net of the federal income tax benefit) of 2.7%. Prior to 2018, income taxes were allocated based on the previous statutory federal income tax rate of 35% and a blended state income tax rate (net of the federal income tax benefit) of 2.2%.
- Capital is assigned to each line of business based on economic equity.

Developing and applying the methodologies that we use to allocate items among our lines of business is a dynamic process. Accordingly, financial results may be revised periodically to reflect enhanced alignment of expense base allocation drivers, changes in the risk profile of a particular business, or changes in our organizational structure.

Year ended December 31,	Consumer Bank			Commercial Bank		
dollars in millions	**2019**	2018	2017	**2019**	2018	2017
SUMMARY OF OPERATIONS						
Net interest income (TE)	**$ 2,366**	$ 2,306	$ 2,133	**$ 1,621**	$ 1,657	$ 1,708
Noninterest income	**922**	915	976	**1,390**	1,328	1,272
Total revenue (TE) [(a)]	**3,288**	3,221	3,109	**3,011**	2,985	2,980
Provision for credit losses	**188**	147	145	**118**	102	84
Depreciation and amortization expense	**97**	103	108	**135**	139	103
Other noninterest expense	**2,078**	2,143	2,167	**1,388**	1,430	1,393
Income (loss) from continuing operations before income taxes (TE)	**925**	828	689	**1,370**	1,314	1,400
Allocated income taxes (benefit) and TE adjustments	**219**	196	255	**223**	207	373
Income (loss) from continuing operations	**706**	632	434	**1,147**	1,107	1,027
Income (loss) from discontinued operations, net of taxes	**—**	—	—	**—**	—	—
Net income (loss)	**706**	632	434	**1,147**	1,107	1,027
Less: Net income (loss) attributable to noncontrolling interests	**—**	—	—	**—**	—	—
Net income (loss) attributable to Key	**$ 706**	$ 632	$ 434	**$ 1,147**	$ 1,107	$ 1,027
AVERAGE BALANCES [(b)]						
Loans and leases	**$ 32,536**	$ 31,307	$ 32,092	**$ 57,988**	$ 55,828	$ 52,783
Total assets [(a)]	**36,096**	34,523	35,360	**66,122**	63,684	59,956
Deposits	**72,544**	68,821	66,711	**36,212**	33,675	33,781
OTHER FINANCIAL DATA						
Expenditures for additions to long-lived assets [(a), (b)]	**$ 150**	$ (38)	$ 90	**$ (8)**	$ (17)	$ 69
Net loan charge-offs [(b)]	**157**	149	152	**128**	85	55
Return on average allocated equity [(b)]	**21.30%**	19.24%	13.19%	**24.99%**	24.94%	23.91%
Return on average allocated equity	**21.30**	19.24	13.19	**24.99**	24.94	23.91
Average full-time equivalent employees [(c)]	**9,292**	9,957	9,990	**2,232**	2,449	2,331

Year ended December 31,	Other			Key		
dollars in millions	**2019**	2018	2017	**2019**	2018	2017
SUMMARY OF OPERATIONS						
Net interest income (TE)	**$ (46)**	$ (23)	$ (11)	**$ 3,941**	$ 3,940	$ 3,830
Noninterest income	**147**	272	230	**2,459**	2,515	2,478
Total revenue (TE) [(a)]	**101**	249	219	**6,400**	6,455	6,308
Provision for credit losses	**139**	(3)	—	**445**	246	229
Depreciation and amortization expense	**142**	158	173	**374**	400	384
Other noninterest expense	**61**	2	154	**3,527**	3,575	3,714
Income (loss) from continuing operations before income taxes (TE)	**(241)**	92	(108)	**2,054**	2,234	1,981
Allocated income taxes (benefit) and TE adjustments	**(96)**	(28)	62	**346**	375	690
Income (loss) from continuing operations	**(145)**	120	(170)	**1,708**	1,859	1,291
Income (loss) from discontinued operations, net of taxes	**9**	7	7	**9**	7	7
Net income (loss)	**(136)**	127	(163)	**1,717**	1,866	1,298
Less: Net income (loss) attributable to noncontrolling interests	**—**	—	2	**—**	—	2
Net income (loss) attributable to Key	**$ (136)** [(d)]	$ 127	$ (165)	**$ 1,717**	$ 1,866	$ 1,296
AVERAGE BALANCES [(b)]						
Loans and leases	**$ 987**	$ 1,203	$ 1,490	**$ 91,511**	$ 88,338	$ 86,365
Total assets [(a)]	**40,961**	38,605	38,403	**143,179**	136,812	133,719

Deposits	**1,274**	2,555	2,454	**110,030**	105,051	102,946
OTHER FINANCIAL DATA						
Expenditures for additions to long-lived assets [(a), (b)]	**$ 103**	$ 103	$ 108	**$ 245**	$ 48	$ 267
Net loan charge-offs [(b)]	**139**	—	1	**424**	234	208
Return on average allocated equity [(b)]	**(1.66)%**	1.62%	(2.25)%	**10.27%**	12.29%	8.47%
Return on average allocated equity	**(1.56)**	1.71	(2.16)	**10.32**	12.33	8.51
Average full-time equivalent employees [(c)]	**5,521**	5,774	6,094	**17,045**	18,180	18,415

(a) Substantially all revenue generated by our major business segments is derived from clients that reside in the United States. Substantially all long-lived assets, including premises and equipment, capitalized software, and goodwill held by our major business segments, are located in the United States.
(b) From continuing operations.
(c) The number of average full-time equivalent employees was not adjusted for discontinued operations.
(d) Other segments included $106 million provision for credit loss, net of tax, related to a previously disclosed fraud incident.

26. Condensed Financial Information of the Parent Company

CONDENSED BALANCE SHEETS

December 31, *in millions*	**2019**	**2018**
ASSETS		
Cash and due from banks	**$ 3,813**	$ 3,241
Short-term investments	**20**	19
Securities available for sale	**10**	10
Other investments	**36**	31
Loans to:		
Banks	**50**	50
Nonbank subsidiaries	**16**	31
Total loans	**66**	81
Investment in subsidiaries:		
Banks	**16,969**	15,554
Nonbank subsidiaries	**823**	833
Total investment in subsidiaries	**17,792**	16,387
Goodwill	**167**	167
Corporate-owned life insurance	**205**	199
Derivative assets	**44**	61
Accrued income and other assets	**295**	279
Total assets	**$ 22,448**	$ 20,475
LIABILITIES		
Accrued expense and other liabilities	**$ 492**	$ 480
Long-term debt due to:		
Subsidiaries	**483**	471
Unaffiliated companies	**4,435**	3,929
Total long-term debt	**4,918**	4,400
Total liabilities	**5,410**	4,880
SHAREHOLDERS' EQUITY [(a)]	**17,038**	15,595
Total liabilities and shareholders' equity	**$ 22,448**	$ 20,475

(a) See Key's Consolidated Statements of Changes in Equity.

CONDENSED STATEMENTS OF INCOME

Year ended December 31, *in millions*	**2019**	**2018**	**2017**
INCOME			
Dividends from subsidiaries:			
Bank subsidiaries	**$ 1,204**	$ 1,675	$ 750
Nonbank subsidiaries	**70**	—	—
Interest income from subsidiaries	**9**	11	10
Other income	**11**	11	9
Total income	**1,294**	1,697	769
EXPENSE			
Interest on long-term debt with subsidiary trusts	**22**	20	17
Interest on other borrowed funds	**151**	137	95
Personnel and other expense	**87**	69	46
Total expense	**260**	226	158
Income (loss) before income taxes and equity in net income (loss) less dividends from subsidiaries	**1,034**	1,471	611
Income tax (expense) benefit	**57**	55	29
Income (loss) before equity in net income (loss) less dividends from subsidiaries	**1,091**	1,526	640
Equity in net income (loss) less dividends from subsidiaries	**626**	340	658
NET INCOME (LOSS)	**1,717**	1,866	1,298
Less: Net income attributable to noncontrolling interests	**—**	—	2
NET INCOME (LOSS) ATTRIBUTABLE TO KEY	**$ 1,717**	$ 1,866	$ 1,296

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CONDENSED STATEMENTS OF CASH FLOWS

Year ended December 31, in millions	2019	2018	2017
OPERATING ACTIVITIES			
Net income (loss) attributable to Key	**$ 1,717**	$ 1,866	$ 1,296
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Deferred income taxes (benefit)	**(43)**	109	38
Stock-based compensation expense	**8**	8	11
Equity in net (income) loss less dividends from subsidiaries	**(626)**	(340)	(658)
Net (increase) decrease in other assets	**39**	(58)	82
Net increase (decrease) in other liabilities	**11**	8	(82)
Other operating activities, net	**244**	79	(114)
NET CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES	**1,350**	1,672	573
INVESTING ACTIVITIES			
Net (increase) decrease in securities available for sale and in short-term and other investments	**(6)**	1	47
Cash infusion from purchase of Cain Brothers	**—**	—	(90)
Proceeds from sales, prepayments and maturities of securities available for sale	**—**	—	1
Net (increase) decrease in loans to subsidiaries	**15**	200	—
NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES	**9**	201	(42)
FINANCING ACTIVITIES			
Net proceeds from issuance of long-term debt	**750**	1,250	—
Payments on long-term debt	**(300)**	(750)	—
Repurchase of Treasury Shares	**(868)**	(1,145)	(730)
Net cash from the issuance (redemption) of Common Shares and preferred stock	**435**	412	(350)
Cash dividends paid	**(804)**	(656)	(480)
NET CASH PROVIDED BY (USED IN) FINANCING ACTIVITIES	**(787)**	(889)	(1,560)
NET INCREASE (DECREASE) IN CASH AND DUE FROM BANKS	**572**	984	(1,029)
CASH AND DUE FROM BANKS AT BEGINNING OF YEAR	**3,241**	2,257	3,286
CASH AND DUE FROM BANKS AT END OF YEAR	**$ 3,813**	$ 3,241	$ 2,257

KeyCorp paid interest on borrowed funds totaling $151 million in 2019, $131 million in 2018, and $120 million in 2017.

27. Revenue from Contracts with Customers

The following table represents a disaggregation of revenue from contracts with customers, by line of business, for the twelve months ended December 31, 2019, and December 31, 2018:

Year ended December 31,	2019			2018		
dollars in millions	Consumer Bank	Commercial Bank	Total Contract Revenue	Consumer Bank	Commercial Bank	Total Contract Revenue
NONINTEREST INCOME						
Trust and investment services income	$ 355	$ 64	$ 419	$ 352	$ 74	$ 426
Investment banking and debt placement fees	—	263	263	—	260	260
Services charges on deposit accounts	228	109	337	239	110	349
Cards and payments income	164	106	270	155	108	263
Other noninterest income	13	—	13	17	1	18
Total revenue from contracts with customers	$ 760	$ 542	$ 1,302	$ 763	$ 553	$ 1,316
Other noninterest income [(a)]			1,010			927
Noninterest income from other segments [(b)]			147			272
Total noninterest income			$ 2,459			$ 2,515

(a) Noninterest income considered earned outside the scope of contracts with customers.
(b) Other includes other segments that consists of corporate treasury, our principal investing unit, and various exit portfolios as well as reconciling items which primarily represents the unallocated portion of nonearning assets of corporate support functions. Charges related to the funding of these assets are part of net interest income and are allocated to the business segments through noninterest expense. Reconciling items also includes intercompany eliminations and certain items that are not allocated to the business segments because they do not reflect their normal operations. Refer to Note 25 ("Business Segment Reporting") for more information.

We had no material contract assets or contract liabilities for the twelve months ended December 31, 2019, and December 31, 2018.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, KeyCorp carried out an evaluation, under the supervision and with the participation of KeyCorp’s management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of KeyCorp’s disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”), to ensure that information required to be disclosed by KeyCorp in reports that it files or submits under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to KeyCorp’s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. Based upon that evaluation, KeyCorp’s Chief Executive Officer and Chief Financial Officer concluded that the design and operation of these disclosure controls and procedures were effective, in all material respects, as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

There were no changes in KeyCorp's internal control over financial reporting during the fourth quarter of 2019 that have materially affected, or are reasonably likely to materially affect, KeyCorp's internal control over financial reporting.

Reports Regarding Internal Controls

Management’s Annual Report on Internal Control over Financial Reporting, the Report of Ernst & Young LLP, Independent Registered Public Accounting Firm on Internal Control over Financial Reporting, and the Report of Ernst & Young LLP, Independent Registered Public Accounting Firm are included in Item 8 on pages 91, 92, and 93, respectively.

ITEM 9B. OTHER INFORMATION

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The names of our executive officers, and biographical information for each, is set forth in Item 1. Business of this report.

The other information required by this item will be set forth in the following sections of KeyCorp’s Definitive Proxy Statement for the 2020 Annual Meeting of Shareholders to be held May 21, 2020 (the “2020 Proxy Statement”), and these sections are incorporated herein by reference:

- “Proposal One: Election of Directors”
- “Corporate Governance Documents — Code of Business Conduct and Ethics”
- “The Board of Directors and Its Committees — Board and Committee Responsibilities — Audit Committee”
- “Additional Information — Other Proposals and Director Nominations for the 2021 Annual Meeting of Shareholders”

KeyCorp expects to file the 2020 Proxy Statement with the SEC on or about April 3, 2020.

Any amendment to, or waiver from a provision of, the Code of Business Conduct and Ethics that applies to KeyCorp’s Chief Executive Officer, Chief Financial Officer, and Chief Accounting Officer, or any other executive officer or director, will be promptly disclosed on KeyCorp's website (www.key.com/ir) as required by laws, rules and regulations of the SEC.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be set forth in the following sections of the 2020 Proxy Statement and these sections are incorporated herein by reference:

- "Compensation Discussion and Analysis"
- "Compensation of Executive Officers and Directors"
- "Compensation and Organization Committee Report"
- "The Board of Directors and Its Committees — Oversight of Compensation Related Risks"

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item will be set forth in the section captioned "Ownership of KeyCorp Equity Securities" contained in the 2020 Proxy Statement, and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item will be set forth in the following sections of the 2020 Proxy Statement and these sections are incorporated herein by reference:

- "The Board of Directors and Its Committees — Director Independence"
- "The Board of Directors and Its Committees — Related Party Transactions"

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item will be set forth in the sections captioned "Audit Matters — Ernst & Young's Fees" and "Audit Matters — Pre-Approval Policies and Procedures" contained in the 2020 Proxy Statement, and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) Financial Statements

The following financial statements of KeyCorp and its subsidiaries, and the auditor's report thereon are filed as part of this report under Item 8. Financial Statements and Supplementary Data:

	Page Number
Report of Ernst & Young LLP, Independent Registered Public Accounting Firm	93
Consolidated Financial Statements	95
Consolidated Balance Sheets at December 31, 2019, and 2018	95
Consolidated Statements of Income for the Years Ended December 31, 2019, 2018, and 2017	96
Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2019, 2018, and 2017	97
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2019, 2018, and 2017	98
Consolidated Statements of Cash Flows for the Years Ended December 31, 2019, 2018, and 2017	99
Notes to Consolidated Financial Statements	100

(a) (2) Financial Statement Schedules

All financial statement schedules for KeyCorp and its subsidiaries have been included in this Form 10-K in the consolidated financial statements or the related footnotes, or they are either inapplicable or not required.

(a) (3) Exhibits*

1

3.1	Third Amended and Restated Articles of Incorporation of KeyCorp, effective May 23, 2019, filed as Exhibit 3.2 to Form 8-K on May 24, 2019.*
3.2	Third Amended and Restated Regulations of KeyCorp, effective May 23, 2019, filed as Exhibit 3.2 to Form 10-Q for the quarterly period ended June 30, 2019.*
4.1	Description of KeyCorp's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.
4.2	Form of Certificate representing Fixed-to-Floating Rate Perpetual Non-Cumulative Preferred Stock, Series D, filed as Exhibit 4.2 to Form 8-K on September 9, 2016.*
4.3	Deposit Agreement, dated as of September 9, 2016, among KeyCorp, Computershare Inc. and Computershare Trust Company, N.A., jointly as depositary, and the holders from time to time of the depositary receipts described therein, filed as Exhibit 4.3 to Form 8-K on September 9, 2016.*
4.4	Form of Depositary Receipt related to Series D Preferred Stock (included as part of Exhibit 4.3), filed as Exhibit 4.4 to Form 8-K on September 9, 2016.*
4.5	Form of Certificate representing Fixed-to-Floating Rate Perpetual Non-Cumulative Preferred Stock, Series E, filed as Exhibit 4.2 to Form 8-K on December 12, 2016.*
4.6	Deposit Agreement, dated as of December 12, 2016, among KeyCorp, Computershare Inc. and Computershare Trust Company, N.A., jointly as depositary, and the holders from time to time of the depositary receipts described therein, filed as Exhibit 4.3 to Form 8-K on December 12, 2016.*
4.7	Form of Depositary Receipt related to Series E Preferred Stock (included as part of Exhibit 4.6), filed as Exhibit 4.4 to Form 8-K on December 12, 2016.*
4.8	Form of Certificate representing Fixed Rate Perpetual Non-Cumulative Preferred Stock, Series F, filed as Exhibit 4.2 to Form 8-K on July 30, 2018.*
4.9	Deposit Agreement, dated as of July 30, 2018, among KeyCorp, Computershare Inc. and Computershare Trust Company, N.A., jointly as depositary, and the holders from time to time of the depositary receipts described therein, filed as Exhibit 4.3 to Form 8-K on July 30, 2018.*
4.10	Form of Depositary Receipt related to Series F Preferred Stock (included as part of Exhibit 4.9), filed as Exhibit 4.4 to Form 8-K on July 30, 2018.*
4.11	Form of Certificate representing Fixed Rate Perpetual Non-Cumulative Preferred Stock, Series G, filed as Exhibit 4.2 to Form 8-K on April 29, 2019.*
4.12	Deposit Agreement, dated as of April 29, 2019, among KeyCorp, Computershare Inc. and Computershare Trust Company, N.A., jointly as depositary, and the holders from time to time of the depositary receipts described therein, filed as Exhibit 4.3 to Form 8-K on April 29, 2019.*
4.13	Form of Depositary Receipt related to Series G Preferred Stock (included as part of Exhibit 4.12), filed as Exhibit 4.4 to Form 8-K on April 29, 2019.*
10.1	Form of Award of Non-Qualified Stock Options (effective June 12, 2009), filed as Exhibit 10.1 to Form 10-K for the year ended December 31, 2014.*
10.2	Form of Performance Shares Award Agreement (2017-2019), filed as Exhibit 10.5 to Form 10-K for the year ended December 31, 2016.*
10.3	Form of Performance Shares Award Agreement (2018-2020), filed as Exhibit 10.5 to Form 10-K for the year ended December 31, 2017.*
10.4	Form of Performance Shares Award Agreement (2018-2020), effective September 2018, filed as Exhibit 10.1 to Form 10-Q for the quarterly period ended September 30, 2018.*
10.5	Form of Performance Shares Award Agreement (2019-2021), filed as Exhibit 10.6 to Form 10-K for the year ended December 31, 2018.*
10.6	Form of Performance Shares Awards Agreement (2020-2022), filed as Exhibit 10.2 to KeyCorp's Registration Statement on Form S-8 on May 23, 2019, File No. 333-231689.*
10.7	Form of Stock Option Award Agreement under KeyCorp 2013 Equity Compensation Plan, filed as Exhibit 10.7 to Form 10-K for the year ended December 31, 2016.*
10.8	Form of Stock Option Award Agreement under KeyCorp 2013 Equity Compensation Plan, effective 2019, filed as Exhibit 10.8 to Form 10-K for the year ended December 31, 2018.*
10.9	Form of Stock Option Award Agreement under KeyCorp 2019 Equity Compensation Plan, filed as Exhibit 10.1 to KeyCorp's Registration Statement on Form S-8 on May 23, 2019, File No. 333-231689.*

10.10	Form of Restricted Stock Unit Award Agreement under KeyCorp 2013 Equity Compensation Plan, filed as Exhibit 10.8 to Form 10-K for the year ended December 31, 2016.*
10.11	Form of Restricted Stock Unit Award Agreement under KeyCorp 2013 Equity Compensation Plan, effective 2019, filed as Exhibit 10.10 to Form 10-K for the year ended December 31, 2018.*.
10.12	Form of Restricted Stock Unit Award Agreement (New Hire) under KeyCorp 2019 Equity Compensation Plan, filed as Exhibit 10.4 to KeyCorp's Registration Statement on Form S-8 on May 23, 2019, File No. 333-231689.*
10.13	Form of Restricted Stock Unit Award Agreement under KeyCorp 2019 Equity Compensation Plan, filed as Exhibit 10.3 to KeyCorp's Registration Statement on Form S-8 on May 23, 2019, File No. 333-231689.*
10.14	Form of Change of Control Agreement (Tier I) between KeyCorp and Certain Executive Officers of KeyCorp, dated as of March 8, 2012, filed as Exhibit 10.8 to Form 10-K for the year ended December 31, 2017.*
10.15	Form of Change of Control Agreement (Tier II Executives) between KeyCorp and Certain Executive Officers of KeyCorp, dated as of April 15, 2012, filed as Exhibit 10.9 to Form 10-K for the year ended December 31, 2017.*
10.16	KeyCorp 2016 Annual Performance Plan, filed as Appendix A to Schedule 14A filed on April 6, 2016.*
10.17	KeyCorp Executive Annual Performance Plan (effective March 13, 2019), filed as Exhibit 10.1 to Form 8-K on March 15, 2019.*
10.18	KeyCorp Long-Term Incentive Deferral Plan, filed as Exhibit 10.14 to Form 10-K for the year ended December 31, 2018.*
10.19	KeyCorp 2004 Equity Compensation Plan (effective March 18, 2004), filed as Exhibit 10.17 to Form 10-K for the year ended December 31, 2014.*
10.20	KeyCorp 2010 Equity Compensation Plan (effective March 11, 2010), filed as Exhibit 10.16 to Form 10-K for the year ended December 31, 2015.*
10.21	KeyCorp 2013 Equity Compensation Plan (effective March 14, 2013), filed as Exhibit 10.17 to Form 10-K for the year ended December 31, 2018.*
10.22	KeyCorp 2019 Equity Compensation Plan (effective January 10, 2019), filed as Exhibit 10.1 to Form 8-K on May 24, 2019.*
10.23	Director Deferred Compensation Plan (May 18, 2000 Amendment and Restatement), filed as Exhibit 10.18 to Form 10-K for the year ended December 31, 2018.*
10.24	Amendment to the Director Deferred Compensation Plan (effective December 31, 2004), filed as Exhibit 10.20 to Form 10-K for the year ended December 31, 2014.*
10.25	KeyCorp Amended and Restated Second Director Deferred Compensation Plan (effective September 18, 2013), filed as Exhibit 10.20 to Form 10-K for the year ended December 31, 2018.*
10.26	KeyCorp Directors' Deferred Share Sub-Plan (effective September 18, 2013), filed as Exhibit 10.21 to Form 10-K for the year ended December 31, 2018.*
10.27	KeyCorp Amended and Restated Directors' Deferred Share Sub-Plan (effective May 23, 2019).
10.28	KeyCorp Excess Cash Balance Pension Plan (effective January 1, 1998), filed as Exhibit 10.22 to Form 10-K for the year ended December 31, 2018.*
10.29	First Amendment to the KeyCorp Excess Cash Balance Pension Plan (effective July 1, 1999), filed as Exhibit 10.23 to Form 10-K for the year ended December 31, 2018.*
10.30	Second Amendment to the KeyCorp Excess Cash Balance Pension Plan (effective January 1, 2003), filed as Exhibit 10.24 to Form 10-K for the year ended December 31, 2018.*
10.31	Restated Amendment to KeyCorp Excess Cash Balance Pension Plan (effective December 31, 2004), filed as Exhibit 10.26 to Form 10-K for the year ended December 31, 2014.*
10.32	Disability Amendment to KeyCorp Excess Cash Balance Pension Plan (effective December 31, 2007), filed as Exhibit 10.21 to Form 10-K for the year ended December 31, 2017.*
10.33	KeyCorp Second Excess Cash Balance Pension Plan (effective February 8, 2010), filed as Exhibit 10.28 to Form 10-K for the year ended December 31, 2014.*
10.34	Trust Agreement for certain amounts that may become payable to certain executives and directors of KeyCorp, dated April 1, 1997, and amended as of August 25, 2003, filed as Exhibit 10.28 to Form 10-K for the year ended December 31, 2018.*
10.35	KeyCorp Deferred Savings Plan (effective January 1, 2015), filed as Exhibit 10.31 to Form 10-K for the year ended December 31, 2014.*

10.36	KeyCorp Second Deferred Savings Plan (effective January 1, 2019), filed as Exhibit 10.30 to Form 10-K for the year ended December 31, 2018.*
10.37	Amended and Restated First Niagara Bank and First Niagara Financial Group, Inc. Directors Deferred Fees Plan, filed as Exhibit 10.32 to Form 10-K for the year ended December 31, 2018.*
10.38	First Niagara Financial Group, Inc. Amended and Restated 2002 Long-Term Incentive Stock Benefit Plan, filed as Exhibit 10.31 to Form 10-K for the year ended December 31, 2016.*
10.39	Form of Executive Performance Based Restricted Stock Unit Agreement under First Niagara Financial Group, Inc. 2012 Equity Incentive Plan for CEO, filed as Exhibit 10.1 to First Niagara Financial Group, Inc.'s Form 10-Q for the quarter ended March 31, 2015.*
10.40	Form of Executive Time-vested Restricted Stock Unit Agreement under First Niagara Financial Group, Inc. 2012 Equity Incentive Plan for CEO, filed as Exhibit 10.2 to First Niagara Financial Group, Inc.'s Form 10-Q for the quarter ended March 31, 2015.*
10.41	Form of Stock Option Agreement under First Niagara Financial Group, Inc. 2012 Equity Incentive Plan, filed as Exhibit 10.36 to Form 10-K for the year ended December 31, 2018.*
10.42	First Niagara Financial Group, Inc. 2012 Equity Incentive Plan, filed as Exhibit 10.33 to Form 10-K for the year ended December 31, 2017.*
10.43	First Niagara Financial Group, Inc. 2012 Equity Incentive Plan, Amendment Number One, filed as Appendix B to First Niagara Financial Group, Inc.'s Schedule 14A filed on March 21, 2014.*
10.44	First Niagara Financial Group, Inc. 2012 Equity Incentive Plan, Amendment Number Two, filed as Appendix C to First Niagara Financial Group, Inc.'s Schedule 14A filed on March 21, 2014.*
21	Subsidiaries of the Registrant.
23	Consent of Independent Registered Public Accounting Firm.
24	Power of Attorney.
31.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials from KeyCorp's Form 10-K Report for the year ended December 31, 2019, formatted in inline XBRL: (i) the Consolidated Balance Sheets; (ii) the Consolidated Statements of Income and Consolidated Statements of Comprehensive Income; (iii) the Consolidated Statements of Changes in Equity; (iv) the Consolidated Statements of Cash Flows; and (v) the Notes to Consolidated Financial Statements.
104	The cover page from KeyCorp's Form 10-K for the year ended December 31, 2019, formatted in inline XBRL (contained in Exhibit 101).

* Incorporated by reference. Copies of these Exhibits have been filed with the SEC. Exhibits that are not incorporated by reference are filed with this report. Shareholders may obtain a copy of any exhibit, upon payment of reproduction costs, by writing KeyCorp Investor Relations, 127 Public Square, Mail Code OH-01-27-0737, Cleveland, OH 44114-1306.

† Certain schedules to this agreement have been omitted pursuant to Item 601(a)(5) of Regulation S-K and KeyCorp agrees to furnish supplementally to the SEC a copy of any omitted schedule upon request.

KeyCorp hereby agrees to furnish the SEC upon request, copies of instruments, including indentures, which define the rights of long-term debt security holders. All documents listed as Exhibits 10.1 through 10.44 constitute management contracts or compensatory plans or arrangements.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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, on the date indicated.

KEYCORP

/s/ Donald R. Kimble

Donald R. Kimble
Chief Financial Officer (Principal Financial Officer)
February 26, 2020

/s/ Douglas M. Schosser

Douglas M. Schosser
Chief Accounting Officer (Principal Accounting Officer)
February 26, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated.

Signature	Title
*Beth E. Mooney	Chairman, Chief Executive Officer (Principal Executive Officer), and Director
*Christopher M. Gorman	President, Chief Operating Officer, and Director
*Donald R. Kimble	Chief Financial Officer (Principal Financial Officer)
*Douglas M. Schosser	Chief Accounting Officer (Principal Accounting Officer)
*Bruce D. Broussard	Director
*Charles P. Cooley	Director
*Gary M. Crosby	Director
*Alexander M. Cutler	Director
*H. James Dallas	Director
*Elizabeth R. Gile	Director
*Ruth Ann M. Gillis	Director
*William G. Gisel, Jr.	Director
*Carlton L. Highsmith	Director
*Richard J. Hipple	Director
*Kristen L. Manos	Director
*Barbara R. Snyder	Director
*David K. Wilson	Director

/s/ Craig T. Beazer

* By Craig T. Beazer, attorney-in-fact
February 26, 2020

Section 2: EX-4.1 (EXHIBIT 4.1)

EXHIBIT 4.1

DESCRIPTION OF KEYCORP'S SECURITIES REGISTERED PURSUANT TO

SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

The following summarizes the terms and provisions of the securities of KeyCorp, an Ohio corporation ("KeyCorp"), registered under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The following does not purport to be complete and is qualified in its entirety by reference to KeyCorp's Third Amended and Restated Articles of Incorporation (the "Articles") and Third Amended and Restated Regulations (the "Regulations"), which KeyCorp has previously filed with the U.S. Securities and Exchange Commission, applicable federal law governing bank holding companies, and applicable Ohio law.

Authorized Capital

KeyCorp's authorized capital stock consists of 2,100,000,000 shares of common stock, par value $1.00 per share ("Common Stock"), and 25,000,000 shares of preferred stock, par value $1.00 per share ("Preferred Stock").

Because KeyCorp is a holding company, the rights of KeyCorp to participate in any distribution of assets of any subsidiary upon its liquidation or reorganization or otherwise (and thus the ability of KeyCorp shareholders to benefit indirectly from such distribution) would be subject to the prior claims of creditors of that subsidiary, except to the extent that KeyCorp itself may be a creditor of that subsidiary with recognized claims. Claims on KeyCorp's subsidiaries by creditors other than KeyCorp will include substantial obligations with respect to deposit liabilities and purchased funds. As a result, shares of KeyCorp capital stock are effectively subordinated to all existing and future liabilities and obligations of its subsidiary, KeyBank. In addition, federal banking law limits the amount of capital distributions that a bank can make to its holding company without prior regulatory approval.

Under Ohio law, shareholders generally are not personally liable for a corporation's acts or debts.

Common Stock

Exchange and Trading Symbol

Shares of Common Stock are listed for trading on the New York Stock Exchange ("NYSE") under the trading symbol "KEY."

Rights and Preferences

All outstanding shares of Common Stock are duly authorized, fully paid, and non-assessable. However, Ohio law provides that a shareholder who knowingly receives any dividend, distribution, or payment made contrary to law or the Articles will be liable to KeyCorp for the amount received by such shareholder that is in excess of the amount that could have been paid or distributed without violation of law or the Articles.

Holders of Common Stock have no conversion, preemptive, or subscription rights. There are no redemption or sinking fund provisions applicable to the Common Stock. The rights, preferences, and privileges of the holders of Common Stock are subject to, and may be adversely affected by, the rights of holders of any shares of Preferred Stock that have been issued or may be issued in the future.

In the event of KeyCorp's voluntary or involuntary liquidation, dissolution, or winding up, the holders of Common Stock are entitled to receive, on a share for share basis, any of KeyCorp's assets or funds available for distribution after KeyCorp has paid in full all of its debts and distributions and the full liquidation preferences of all series of its outstanding Preferred Stock.

Voting Rights

Subject to the rights, if any, of the holders of any shares of Preferred Stock, holders of Common Stock have exclusive voting rights and are entitled to one vote for each share of Common Stock on all matters voted upon by the shareholders. Holders of Common Stock do not have the right to cumulate their voting power.

KeyCorp has adopted a majority voting standard in uncontested elections of directors and plurality voting in contested elections. Except as otherwise provided by the Articles (including Article VI of the Articles), the Regulations, or by law, all matters brought to a vote of the holders of Common Stock must be authorized and approved by the affirmative vote of a majority of the shares of Common Stock represented in person or by proxy at a meeting of KeyCorp's shareholders.

Dividends

Subject to preferences that may be applicable to any then outstanding Preferred Stock, the holders of Common Stock are entitled to share equally, share for share, in dividends declared, if any, by the KeyCorp Board of Directors (the "Board of Directors") out of legally available funds.

Transfer Agent

Computershare Investor Services, LLC is the transfer agent for the Common Stock.

Preferred Stock

The Board of Directors is authorized to cause shares of Preferred Stock to be issued in one or more series and with respect to each such series, fix (a) the designation of the series, (b) the authorized number of shares of the series, which number the Board of Directors may (except as otherwise provided in the creation of the series) increase or decrease, (c) the dividend rate or rates (which may be fixed or adjustable) of the shares of the series, (d) the dates on which dividends, if declared, will be payable, and, if applicable, the dates from which dividends shall be cumulative, (e) redemption rights and prices, if any, for shares of the series, (f) the amount, terms, conditions, and manner of operation of any retirement or sinking fund to be provided for the purchase or redemption of shares of the series, (g) the amounts payable on the shares of the series in any liquidation, dissolution, or winding up of the affairs of KeyCorp, (h) whether the shares of the series will be convertible into another class of Preferred Stock or into shares of Common Stock and the terms and conditions upon which conversions may be made, and (i) the restrictions, if any, upon the issue of any additional shares of the same series.

The rights of the holders of Common Stock are generally subject to the prior rights of the holders of any outstanding shares of Preferred Stock with respect to dividends, liquidation preferences, and other matters.

As of December 31, 2019, KeyCorp has authorized for issuance: (1) 21,000 shares of Fixed-to-Floating Rate Perpetual Non-Cumulative Preferred Stock, Series D ("Series D Preferred Stock"), with a liquidation preference of $25,000 per share, (2) 500,000 shares of Fixed-to-Floating Rate Perpetual Non-Cumulative Preferred Stock, Series E ("Series E Preferred Stock"), with a liquidation preference of $1,000 per share, (3) 425,000 shares of Fixed Rate Perpetual Non-Cumulative Preferred Stock, Series F ("Series F Preferred Stock"), with a liquidation preference of $1,000 per share, and (4) 450,000 shares of Fixed Rate Perpetual Non-Cumulative Preferred Stock, Series G ("Series G Preferred Stock"), with a liquidation preference of $1,000 per share. The Series D Preferred Stock, Series E Preferred Stock, Series F Preferred Stock, and Series G Preferred Stock are collectively referred to herein as the "Series D, E, F, and G Preferred Stock."

The Series D, E, F, and G Preferred Stock rank equally as to dividends and distributions on liquidation and include the same provisions with respect to restrictions on declaration and payment of dividends and voting rights. KeyCorp may from time to time, without notice to or the consent of holders of Series D, E, F, or G Preferred Stock, (i) increase (but not in excess of the total number of authorized shares of Preferred Stock) or decrease (but not below the number of shares of Series D, E, F, or G Preferred Stock outstanding, as applicable) and/or (ii) issue additional shares of Preferred Stock that rank equally with or junior to the Series D, E, F, and G Preferred Stock.

Exchange and Trading Symbols

Shares of Series E Preferred Stock, Series F Preferred Stock, and Series G Preferred Stock are represented by depositary shares, each representing a 1/40th interest in a share of the series. The depositary shares are listed on the NYSE under the following trading symbols:

Depositary Share	Trading Symbol
Depositary Shares each representing a 1/40th interest in a share of Series E Preferred Stock	KEY PrI
Depositary Shares each representing a 1/40th interest in a share of Series F Preferred Stock	KEY PrJ
Depositary Shares each representing a 1/40th interest in a share of Series G Preferred Stock	KEY PrK

Shares of Series D Preferred Stock are also represented by depositary shares, each representing a 1/25th ownership interest in a share of the series. Neither the Series D Preferred Stock nor the depositary shares representing the series are listed on any securities exchange or electronic trading network.

For more information on the terms of the depositary shares representing shares of Preferred Stock, see "*Depositary Shares*" below.

Rights and Preferences

Shares of Series D, E, F, and G Preferred Stock rank, with respect to the payment of dividends and the distribution of assets upon voluntary or involuntary liquidation, dissolution, and winding up of the affairs of KeyCorp:

- junior to KeyCorp's secured and unsecured debt;
- senior to the Common Stock and any other series of KeyCorp junior stock that may be issued in the future;
- equally with each other series of Preferred Stock that by its terms is expressly stated to be on parity with the Series D, E, F, and G Preferred Stock; and
- junior to any Preferred Stock that by its terms is expressly stated to be senior to the Series D, E, F, and G Preferred Stock.

In addition, KeyCorp will generally be able to pay dividends and distributions upon the voluntary or involuntary liquidation, dissolution, or winding up of the affairs of KeyCorp only out of lawfully available assets for such payment (i.e., after taking account of all indebtedness and other non-equity claims). The shares of Series D, E, F, and G Preferred Stock are duly authorized, fully paid, and nonassessable, and holders of Series D, E, F, and G Preferred Stock do not have preemptive or subscription rights to acquire more capital stock of KeyCorp.

The Series D, E, F, and G Preferred Stock are not convertible into, or exchangeable for, shares of any other class or series of stock or other securities of KeyCorp. The Series D, E, F, and G Preferred Stock have no stated maturity and are not subject to any sinking fund or other obligation of KeyCorp to redeem or repurchase the Series D, E, F, or G Preferred Stock.

Dividends

The Series D, E, F, and G Preferred Stock include the same provisions with respect to the payment of dividends. Dividends on shares of the Series D, E, F, and G Preferred Stock are not mandatory and are non-cumulative. Holders of Series D, E, F, and G Preferred Stock are entitled to receive, when, as, and if declared by the Board of Directors or any duly authorized committee thereof, out of legally available assets, the following dividends on the applicable liquidation price per share, on a non-cumulative cash basis, quarterly in arrears on the 15th day of March, June, September, and December of each year, commencing on the dates set forth below:

Series	Dividend Rate	Dividend Commencement Date
Series D Preferred Stock	5.000% per annum to but excluding September 15, 2026 and thereafter at a floating rate per annum equal to three-month LIBOR, reset quarterly, plus 3.606%.	December 15, 2016
Series E Preferred Stock	6.125% per annum to but excluding December 15, 2026 and thereafter at a floating rate per annum equal to three-month LIBOR, reset quarterly, plus 3.892%.	March 15, 2017
Series F Preferred Stock	5.650% per annum.	December 15, 2018
Series G Preferred Stock	5.625% per annum.	September 15, 2019

If the Board of Directors or a duly authorized committee thereof has not declared and paid a dividend on the Series D, E, F, or G Preferred Stock before the applicable payment date for any dividend period, such dividend will not be cumulative and will not be payable for such dividend period, and KeyCorp will have no obligation to pay dividends for such dividend period, whether or not dividends on the Series D, E, F, or G Preferred Stock, parity stock, junior stock, or any other class or series of Preferred Stock, are declared for any future dividend period.

A "dividend period" means the period from, and including, a dividend payment date to, but excluding, the next succeeding dividend payment date, except for the initial dividend period, which varies among the series of Preferred Stock and is specified in the terms of each series. For purposes of determining a dividend period during the floating rate period applicable to the Series D Preferred Stock and Series E Preferred Stock, the dividend payment date shall be the actual payment date of the applicable dividend.

With respect to each dividend period, dividends on the Series D, E, F, and G Preferred Stock are calculated from, and include, the most recently preceding dividend payment date (or, in the case of the initial dividend period, from and including the original issuance date) at the dividend rate on the liquidation preference of $25,000 per share of Series D Preferred Stock (equivalent to $1,000 per depositary share) or $1,000 per share of Series E, F, or G Preferred Stock (equivalent to $25 per depositary share). If KeyCorp issues additional shares of Series D, E, F, or G Preferred Stock, the initial dividend period with respect to those additional shares will commence from, and include, the applicable original issuance date of those additional shares at the applicable dividend rate. Notwithstanding the foregoing, dividends on the Series D, E, F, and G Preferred Stock will not be declared, paid, or set aside for payment to the extent such act would cause KeyCorp to fail to comply with laws, rules, and regulations applicable thereto, including applicable regulatory capital rules.

KeyCorp calculates dividends, including dividends payable for any partial dividend period, on the Series D, E, F, and G Preferred Stock on the basis of a 360-day year consisting of twelve 30-day months. The amount of any dividend payable during a floating rate period applicable to the Series D Preferred Stock and Series E Preferred Stock, including dividends payable for any partial dividend period, will be calculated on the basis of a 360-day year and the actual number of days elapsed. Dollar amounts resulting from that calculation are rounded to the nearest cent, with one-half cent being rounded upward. Dividend rights on any Series D, E, F, or G Preferred Stock to be redeemed will cease after the redemption date, as described below under "-*Redemption*," unless KeyCorp defaults in the payment of the applicable redemption price of the shares called for redemption.

KeyCorp pays dividends to the holders of record of shares of the Series D, E, F, and G Preferred Stock as they appear on KeyCorp's stock register on each record date, which is the 15th calendar day before the related dividend payment date (provided, however, if any such date is not a business day then the record date is the next succeeding day that is a business day) or such other date as determined by the Board of Directors or any duly authorized committee thereof. If any date on which dividends would otherwise be payable is not a business day, then payment of any dividend otherwise payable on such date is made on the next succeeding business day, without interest or other payment in respect of such delay. In the event that any dividend payment date during the floating rate period applicable to the Series D Preferred Stock or Series E Preferred Stock falls on a date that is not a business day, the payment of any dividend otherwise payable on such date will be made on the next succeeding business day unless that day falls in the next calendar month, in which case payment of any dividend otherwise payable on such date will be made on the immediately preceding business day, and such dividends will be payable on, and calculated to, but excluding, the actual payment date.

A "business day" means any day, other than a Saturday or Sunday, that is neither a legal holiday nor a day on which banking institutions and trust companies in New York, New York or Cleveland, Ohio are permitted or required by any applicable law to close. For dividends payable during the floating rate period applicable to the Series D Preferred Stock and Series E Preferred Stock, a "business day" means any day that would be considered a business day during the fixed rate period that is also a London banking day.

Dividends on shares of Series D, E, F, and G Preferred Stock are not cumulative. Accordingly, if the Board of Directors or a duly authorized committee thereof does not declare a dividend on the Series D, E, F, or G Preferred Stock payable in respect of any dividend period before the related dividend payment date, such dividend will not be payable and KeyCorp will have no obligation to pay, and the holders of Series D, E, F, or G Preferred Stock, as applicable, shall have no right to receive, dividends for such dividend period on the dividend payment date or at any future time, or interest with respect to such dividends, whether or not dividends on the Series D, E, F, or G Preferred Stock, as applicable, are declared for any future dividend period.

So long as any share of Series D, E, F, or G Preferred Stock remains outstanding:

1) no dividend shall be declared or paid or set aside for payment and no distribution shall be declared or made or set aside for payment on any junior stock (other than a dividend payable solely in junior stock or any dividend or distribution of capital stock or rights to acquire capital stock of KeyCorp in connection with a shareholders' rights plan or any redemption or repurchase of capital stock or rights to acquire capital stock under any such plan); and

2) no shares of junior stock shall be repurchased, redeemed, or otherwise acquired for consideration by KeyCorp, directly or indirectly (other than (a) as a result of a reclassification of junior stock for or into

other junior stock, (b) the exchange or conversion of one share of junior stock for or into another share of junior stock, (c) through the use of the proceeds of a substantially contemporaneous sale of other shares of junior stock, (d) purchases, redemptions, or other acquisitions of shares of junior stock pursuant to any employment contract, benefit plan, or other similar arrangement with or for the benefit of employees, officers, directors, or consultants, (e) purchases of shares of junior stock pursuant to a contractually binding requirement to buy junior stock existing prior to or during the most recent preceding dividend period for which the full dividends for the then most recently completed dividend period on all outstanding shares of Series D, E, F, or G Preferred Stock, as applicable, have been declared and paid or declared and a sum sufficient for the payment thereof has been set aside, including under a contractually binding stock repurchase plan, or (f) the purchase of fractional interests in shares of junior stock pursuant to the conversion or exchange provisions of such stock or the security being converted or exchanged), nor shall any monies be paid to or made available for a sinking fund for the redemption of any such securities by KeyCorp;

unless, in each case, the dividends for the then most recently completed dividend period on all outstanding shares of Series D, E, F, or G Preferred Stock, as applicable, have been declared and paid in full or declared and a sum sufficient for the payment in full thereof has been set aside.

As used herein, “junior stock” means Common Stock and any other class or series of stock of KeyCorp over which Series D, E, F, and G Preferred Stock have preference or priority in the payment of dividends or in the distribution of assets on any voluntary or involuntary liquidation, dissolution, or winding up of the affairs of KeyCorp.

When dividends are not paid in full upon shares of Series D, E, F, and G Preferred Stock and any parity stock, all dividends declared upon shares of Series D, E, F, and G Preferred Stock and any such parity stock will be declared on a proportional basis so that the amount of dividends declared per share will bear to each other the same ratio as the ratio between the then-current dividends due on the shares of the Series D, E, F, and G Preferred Stock, as applicable, and (i) in the case of any series of parity stock that is non-cumulative Preferred Stock, the aggregate of the current and unpaid dividends due on such series of Preferred Stock, and (ii) in the case of any series of parity stock that is cumulative Preferred Stock, the aggregate of the current and accumulated and unpaid dividends due on such series of Preferred Stock.

As used herein, “parity stock” means any other class or series of stock of KeyCorp that ranks equally with the Series D, E, F, and G Preferred Stock in the payment of dividends and in the distribution of assets on any voluntary or involuntary liquidation, dissolution, or winding up of the affairs of KeyCorp. Each of the Series D, E, F, and G Preferred Stock is parity stock.

No interest will be payable in respect of any declared but unpaid dividend payment on shares of Series D, E, F, or G Preferred Stock that is paid after the relevant dividend payment date for such dividend period.

If the Board of Directors determines not to pay any dividend or a full dividend on the Series D, E, F, or G Preferred Stock on a dividend payment date, KeyCorp will provide, or cause to be provided, written notice to the holders of the Series D, E, F, or G Preferred Stock, as applicable, prior to such date.

Subject to the foregoing, and not otherwise, such dividends (payable in cash, stock, or otherwise), as may be determined by the Board of Directors or any duly authorized committee thereof, may be declared and paid on the Common Stock and any other stock ranking equally with or junior to the Series D, E, F, and G Preferred Stock from time to time out of any assets legally available for such payment, and the holders of Series D, E, F, or G Preferred Stock shall not be entitled to participate in any such dividend.

Liquidation Rights

Upon any voluntary or involuntary liquidation, dissolution, or winding up of the affairs of KeyCorp, holders of Series D, E, F, and G Preferred Stock are entitled to receive out of assets of KeyCorp legally available for distribution to shareholders, after satisfaction of liabilities to creditors and subject to the rights of holders of any securities ranking senior to the Series D, E, F, and G Preferred Stock, before any distribution of assets is made to holders of Common Stock or of any of KeyCorp’s other shares of stock ranking junior as to such a distribution to the shares of Series D, E, F, and G Preferred Stock, a liquidating distribution in the amount of the liquidation preference of $25,000 per share of Series D Preferred Stock (equivalent to $1,000 per depositary share) or $1,000 per share of Series E, F, and G Preferred Stock (equivalent to $25 per depositary share) plus declared and unpaid dividends, without regard to any undeclared dividends. Holders of Series D, E, F, and G Preferred Stock will not be entitled to any other amounts from KeyCorp after they have received their full liquidating distribution.

In any such distribution, if the assets of KeyCorp are not sufficient to pay the liquidation preferences plus declared and unpaid dividends in full to all holders of Series D, E, F, and G Preferred Stock and all holders of any other shares of KeyCorp stock ranking equally as to such distribution with the Series D, E, F, and G Preferred Stock, the amounts paid to the holders of Series D, E, F, and G Preferred Stock and to the holders of all such other parity stock will be paid pro rata in accordance with the respective aggregate liquidating distribution owed to those holders. If the liquidation preference plus declared and unpaid dividends has been paid in full to all holders of Series D, E, F, and G Preferred Stock and any other shares of KeyCorp stock ranking equally as to the liquidation distribution, the holders of KeyCorp junior stock shall be entitled to receive all remaining assets of KeyCorp according to their respective rights and preferences.

For purposes of the Series D, E, F, and G Preferred Stock, the merger, consolidation, or other business combination transaction of KeyCorp into or with any other entity, including a merger, consolidation, or other business combination transaction in which the holders of Series D, E, F, and G Preferred Stock receive cash, securities, or other property for their shares, or the sale, lease, or exchange of all or substantially all of the property and assets of KeyCorp for cash, securities, or other property, shall not constitute a voluntary or involuntary liquidation, dissolution, or winding up of the affairs of KeyCorp.

Redemption

None of the Series D, E, F, or G Preferred Stock is subject to any mandatory redemption, sinking fund, or other similar provision. Except upon a regulatory capital treatment event, as described below, the Series D, E, F, and G Preferred Stock is not redeemable prior to the dates set forth below:

Series	**Date**
Series D Preferred Stock	September 15, 2026
Series E Preferred Stock	December 15, 2026
Series F Preferred Stock	December 15, 2023
Series G Preferred Stock	September 15, 2024

On those dates, and on any dividend payment date thereafter, the Series D, E, F, or G Preferred Stock, as applicable, will be redeemable at KeyCorp's option, in whole or in part, at a redemption price equal to $25,000 per share of Series D Preferred Stock (equivalent to $1,000 per depositary share) or $1,000 per share of Series E, F, or G Preferred Stock (equivalent to $25 per depositary share), plus any declared and unpaid dividends, without regard to any undeclared dividends. Holders of Series D, E, F, and G Preferred Stock will have no right to require the redemption or repurchase of the Series D, E, F, or G Preferred Stock, as applicable. Dividend rights will cease after the applicable redemption date unless KeyCorp defaults in the payment of the redemption price of the shares of the Series D, E, F, or G Preferred Stock called for redemption.

Notwithstanding the foregoing, at any time within 90 days of KeyCorp's good faith determination that an event has occurred that would constitute a regulatory capital treatment event (as defined below), KeyCorp may, at its option, subject to the approval of the Federal Reserve, provide notice of KeyCorp's intent to redeem in accordance with the procedures described below, and subsequently redeem, all (but not less than all) of the shares of Series D, E, F, or G Preferred Stock at the time outstanding at a redemption price equal to $25,000 per share of Series D Preferred Stock (equivalent to $1,000 per depositary share) or $1,000 per share of Series E, F, or G Preferred Stock (equivalent to $25 per depositary share), plus any declared and unpaid dividends, without regard to any undeclared dividends.

A "regulatory capital treatment event" means KeyCorp's determination, in good faith, that, as a result of any

- amendment to, clarification of, or change in (including any announced prospective amendment to, clarification of, or change in) the laws, regulations, or policies of the United States or any political subdivision of or in the United States that is enacted or announced or that becomes effective after the initial issuance of any share of Series D, E, F, or G Preferred Stock;

- proposed amendment to or change in those laws, regulations, or policies that is announced or becomes effective after the initial issuance of any share of Series D, E, F, or G Preferred Stock; or

- official administrative decision, judicial decision, administrative action, or other official pronouncement interpreting or applying those laws, regulations, or policies that is announced or that becomes effective after the initial issuance of any share of Series D, E, F, or G Preferred Stock,

there is more than an insubstantial risk that KeyCorp will not be entitled to treat the full liquidation value of all shares of Series D, E, F, and G Preferred Stock then outstanding as additional tier 1 capital (or its equivalent) for purposes of the capital adequacy guidelines or regulations of the appropriate federal banking agency, as then in effect and applicable, for as long as any share of Series D, E, F, and G Preferred Stock is outstanding.

If shares of Series D, E, F, or G Preferred Stock are to be redeemed, the notice of redemption shall be given to the holders of record of the Series D, E, F, or G Preferred Stock to be redeemed, either by first class mail, postage prepaid, addressed to the holders of record of such shares to be redeemed at their respective last addresses appearing on KeyCorp's stock register or transmitted by such other method approved by the depositary, in its reasonable discretion, not less than 30 days nor more than 60 days prior to the date fixed for redemption thereof (provided that, if the depositary shares representing the Series D, E, F, or G Preferred Stock are held in book-entry form through the Depositary Trust Company (DTC) (or a successor securities depositary), KeyCorp may give such notice in any manner permitted by DTC (or such successor)). Each notice of redemption will include a statement setting forth: (1) the redemption date; (2) the number of shares of Series D, E, F, or G Preferred Stock to be redeemed and, if less than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder (or the method of determining such number); (3) the redemption price; (4) the place or places where the certificates evidencing shares of Series D, E, F, or G Preferred Stock are to be surrendered for payment of the redemption price; and (5) that dividend rights with respect to the shares to be redeemed will cease on the redemption date. If notice of redemption of any shares of Series D, E, F, or G Preferred Stock has been duly given and if on or before the redemption date the funds necessary for such redemption have been set aside by KeyCorp for the benefit of the holders of any shares of Series D, E, F, or G Preferred Stock so called for redemption, then, on and after the redemption date, dividend rights with respect to such shares of Series D, E, F, or G Preferred Stock will cease, such shares of Series D, E, F, or G Preferred Stock shall no longer be deemed outstanding and all rights of the holders of such shares will terminate, except the right to receive the redemption price without interest. See "*Depositary Shares*" below for information about redemption of the depositary shares relating to the Series D, E, F, and G Preferred Stock.

In case of any redemption of only part of the shares of the Series D, E, F, or G Preferred Stock at the time outstanding, the shares to be redeemed shall be selected either pro rata or by lot (or otherwise, to the extent required by DTC with respect to depositary shares held in book-entry form).

Shares of Series D, E, F, or G Preferred Stock that are redeemed, purchased, or otherwise acquired by KeyCorp will be cancelled and revert to authorized, but unissued shares of Preferred Stock, undesignated as to series.

Under the Federal Reserve's current risk-based capital regulations applicable to bank holding companies, any redemption of the Series D, E, F, or G Preferred Stock is subject to prior approval of the Federal Reserve, and KeyCorp must either replace the shares to be redeemed with an equal amount of instruments that qualify as common equity tier 1 capital or additional tier 1 capital, or demonstrate to the Federal Reserve that following such redemption KeyCorp will continue to hold capital commensurate with its risk.

Voting Rights

Except as provided below, the holders of Series D, E, F, and G Preferred Stock have no voting rights.

Whenever full dividends on any series of Preferred Stock, including but not limited to the Series D, E, F, and G Preferred Stock, have not been paid for at least six quarterly dividend periods, whether or not consecutive and whether or not actually declared by the Board of Directors (a "Nonpayment"), the holders of the Series D, E, F, and G Preferred Stock, together with holders of all other outstanding series of Preferred Stock, will be entitled to vote as a single class for the election of a total of two additional members of the Board of Directors (the "Preferred Directors"). In that event, the number of directors on the Board of Directors shall automatically increase by two and, at the written request of not less than 20% of the total number of shares of Preferred Stock, including but not limited to the Series D, E, F, and G Preferred Stock, at the time outstanding, a special meeting of the holders of all such outstanding series of Preferred Stock, including the Series D, E, F, and G Preferred Stock, shall be called for the election of the two directors (unless such request is received less than 90 days before the date fixed for the next annual meeting of shareholders, in which event such election shall be held at such next annual meeting of shareholders), followed by such election at each subsequent annual meeting. If the Secretary of KeyCorp fails to call the above special meeting within 20 days of receiving proper notice, any holder of Preferred Stock, including but not limited to the Series D, E, F, and G Preferred Stock, may call such a meeting at KeyCorp's expense solely for the election of Preferred Directors.

These voting rights will continue until full cumulative dividends for all past dividend payment periods on all outstanding series of cumulative Preferred Stock, if any, have been paid or declared and set apart for payment and non-cumulative dividends have been paid regularly for at least one full year on all series of KeyCorp's non-cumulative Preferred Stock.

The Preferred Directors elected will serve until the next annual meeting of shareholders or until any respective successor is elected and qualified. If and when full non-cumulative dividends on all of KeyCorp's non-cumulative Preferred Stock have been regularly paid for at least a full year following a Nonpayment and all past accumulated dividends on all of KeyCorp's cumulative Preferred Stock, if any, have been paid or declared and a sum sufficient for the payment of such dividends has been set aside, the holders of the Series D, E, F, and G Preferred Stock shall be divested of the foregoing voting rights, along with holders of all other outstanding series of Preferred Stock (subject to revesting in the event of any subsequent Nonpayment), and the term of office of the Preferred Directors elected shall continue until KeyCorp's next annual meeting. If any vacancy shall occur in the office of any Preferred Director prior to the end of the term of office, such vacancy shall be filled for the unexpired term by the appointment by the remaining Preferred Director of a new Preferred Director for the unexpired term of such former Preferred Director. The Preferred Directors shall each be entitled to one vote per director on any matter. The right to elect Preferred Directors shall be subject to the same provisions described above in the case of future dividend defaults.

If the holders of all series of Preferred Stock become entitled to vote as a single class for the election of directors, the Preferred Stock may be considered a class of voting securities under interpretations adopted by the Federal Reserve. As a result, acquisitions of 10% or more of the outstanding shares of Preferred Stock may be subject to prior approval by the Federal Reserve under the Change in Bank Control Act or the Bank Holding Company Act.

The affirmative vote or consent of the holders of at least two-thirds of all of the shares of the then outstanding shares of Preferred Stock, including but not limited to the Series D, E, F, and G Preferred Stock, given in person or by proxy, either in writing or at a meeting called for the purpose at which the holders of such outstanding shares of Preferred Stock shall vote separately as a class, shall be required to amend, alter, or repeal the provisions of the Articles or Regulations which would adversely affect the voting powers, rights, or preferences of the holders of such outstanding shares of Preferred Stock (including the Series D, E, F, and G Preferred Stock); provided, however, that neither the amendment of the Articles to authorize or to increase the authorized or outstanding number of shares of any class ranking junior to or on a parity with the Preferred Stock, nor the amendment of the Regulations so as to change the number of KeyCorp's directors, will be deemed to adversely affect the voting powers, rights, or preferences of the holders of Preferred Stock, and accordingly any such amendment referred to in this proviso may be made without the vote or consent of the holders of Preferred Stock (including the holders of the Series D, E, F, and G Preferred Stock); and provided further that if any amendment, alteration, or repeal would adversely affect the rights or preferences of one or more but not all of the then outstanding series of Preferred Stock, the affirmative vote or consent of the holders of at least two-thirds of the then outstanding shares of the series so affected shall also be required.

The affirmative vote or consent of the holders of at least two-thirds of all of the shares of the then outstanding shares of Preferred Stock, including but not limited to the Series D, E, F, and G Preferred Stock, given in person or by proxy, either in writing or at a meeting called for the purpose at which the holders of such outstanding shares of Preferred Stock shall vote separately as a class, shall be necessary to effect the consummation of a combination (as defined in Section 1701.01(Q) of the Ohio General Corporation Law) or majority share acquisition (as defined in Section 1701.01(R) of the Ohio General Corporation Law) involving the Preferred Stock, or of a merger or consolidation of KeyCorp with another corporation or other entity, or any merger or consolidation of KeyCorp with or into any entity other than a corporation (but so far as the holders of Preferred Stock are concerned, such combination, majority share acquisition, merger, or consolidation may be effected with such vote or consent), unless in each case (x) the shares of Preferred Stock remain outstanding or, in the case of any such merger or consolidation with respect to which KeyCorp is not the surviving or resulting corporation, are converted into or exchanged for preference securities of the surviving or resulting corporation or a corporation controlling such corporation that is an entity organized and existing under the laws of the United States, any state thereof or the District of Columbia, and (y) the shares of Preferred Stock remaining outstanding or such new preference securities, as the case may be, have such voting powers, rights, privileges, and preferences as are not materially less favorable to the holders thereof than the voting powers, rights, privileges, and preferences of the holders of Preferred Stock; provided that if such amendment, alteration or repeal would adversely affect the rights, privileges, or preferences of one or more but not all then outstanding series of Preferred Stock, the affirmative vote or consent of the holders of at least two-thirds of the then outstanding shares of the series so affected shall also be required.

The affirmative vote or consent of the holders of at least two-thirds of the then outstanding shares of Preferred Stock, given in person or by proxy, either in writing or at a meeting called for the purpose at which the holders of all such outstanding shares of Preferred Stock shall vote as a single class shall be required to effect any one or more of the following:

- The authorization of, or the increase in the authorized number of, any shares of any class ranking senior to the Preferred Stock; or

- The purchase or redemption for sinking fund purposes or otherwise of less than all of the then outstanding shares of Preferred Stock except in accordance with a purchase offer made to all holders of record of such Preferred Stock, unless all dividends on all Preferred Stock then outstanding for all previous dividend periods shall have been declared and paid or funds sufficient for the payment of those dividends have been set apart and all accrued sinking fund obligations applicable thereto shall have been complied with.

Additional Classes or Series of Stock

KeyCorp has the right to create and issue additional classes or series of stock ranking equally with or junior to the Series D, E, F, and G Preferred Stock as to dividends and/or distribution of assets upon KeyCorp's liquidation, dissolution, or winding up without the consent of the holders of the Series D, E, F, and G Preferred Stock or the holders of the related depositary shares. KeyCorp may create and issue additional shares of Preferred Stock senior to the Series D, E, F, and G Preferred Stock as to dividends and/or distribution of assets upon KeyCorp's liquidation, dissolution, or winding up with the requisite consent of the holders of the Series D, E, F, and G Preferred Stock and KeyCorp's parity stock entitled to vote thereon, voting together as a class.

Registrar

Computershare Trust Company, N.A. is the registrar and redemption agent and Computershare Inc. is the dividend disbursing agent for the Series D, E, F, and G Preferred Stock.

Depositary Shares

For purposes of the following, references to "holders" of depositary shares mean those who own depositary shares registered in their own names, on the books that KeyCorp or the depositary maintained for this purpose, and not indirect holders who own beneficial interests in depositary shares registered in street name or issued in book-entry form through DTC.

As described above under "*Preferred Stock -- Exchange and Trading Symbols*," KeyCorp has issued fractional interests in shares of its Series D, E, F, and G Preferred Stock in the form of depositary shares. With respect to the Series D Preferred Stock, each depositary share represents a 1/25th ownership interest in a share of Series D Preferred Stock, and with respect to the Series E, F, and G Preferred Stock, each depositary share represents a 1/40th ownership interest in a share of Series E, F, and G Preferred Stock, as applicable. The depositary shares are evidenced by a depositary receipt and have been deposited under deposit agreements among KeyCorp and Computershare Trust Company, N.A. and Computershare Inc., jointly as depositary.

Subject to the terms of the deposit agreements, each holder of a depositary share is entitled, through the depositary, in proportion to the applicable fraction of a share of Series D, E, F, or G Preferred Stock, as applicable, represented by such depositary share, to all the rights and preferences of the Series D, E, F, or G Preferred Stock represented thereby (including dividend, voting, redemption, and liquidation rights). Immediately following their issuance, the Series D, E, F, and G Preferred Stock were deposited with the depositary, which then issued depositary receipts evidencing the depositary shares to the initial holders thereof.

Amendment and Termination of the Deposit Agreement

KeyCorp may amend the forms of depositary receipts evidencing the depositary shares and any provision of the deposit agreements at any time and from time to time by agreement with the depositary without the consent of the holders of depositary receipts. However, any amendment that will materially and adversely alter the rights of the holders of depositary receipts will not be effective unless the holders of at least two-thirds of the affected depositary shares then outstanding approve the amendment. Every holder of an outstanding depositary receipt at the time any such amendment becomes effective shall be deemed, by continuing to hold such depositary receipts, to consent and agree to such amendment and to be bound by the applicable depositary agreement as amended thereby.

KeyCorp will make no amendment that impairs the right of any holder of depositary shares to receive shares of Series D, E, F, or G Preferred Stock and any money or other property represented by those depositary shares, except in order to comply with mandatory provisions of applicable law or the rules and regulations of any governmental body, agency, or commission, or applicable securities exchange.

A deposit agreement will automatically terminate if:

- all outstanding depositary shares have been redeemed pursuant to the deposit agreement;

- there shall have been a final distribution made in respect of the Series D, E, F, or G Preferred Stock, as applicable, in connection with any voluntary or involuntary liquidation, dissolution, or winding up of the affairs of KeyCorp and such distribution shall have been distributed to the holders of depositary receipts representing depositary shares pursuant to the terms of the applicable deposit agreement;
-
- upon the consent of holders of the applicable depositary receipts representing in the aggregate not less than two-thirds of the depositary shares outstanding; or
- at any time by any party upon a material breach of a representation, covenant or term of the applicable deposit agreement by any other party which is not cured within a period not to exceed 30 days after the date of written notice thereof.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions, if any, received in respect of shares of the Preferred Stock underlying the depositary shares to the record holders of depositary shares in proportion to the numbers of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares is the same date as the record date for the shares of Preferred Stock.

If there is a distribution other than in cash, rights, preferences, or privileges the depositary will distribute property received by it to the record holders of depositary shares, unless the depositary determines, in consultation with KeyCorp, that it is not feasible to make such distribution. If this occurs, the depositary may, with KeyCorp's approval, adopt another method for the distribution, including selling the property (at a public or private sale) in a commercially reasonable manner and distributing the net proceeds from the sale to the holders.

The amounts distributed to holders of depositary shares will be reduced by any amounts required to be withheld by the depositary or by KeyCorp on account of taxes or other governmental charges.

Redemption of Depositary Shares

If KeyCorp redeems the Series D, E, F, or G Preferred Stock represented by the depositary shares, the depositary shares will be redeemed from the proceeds received by the depositary resulting from the redemption of the Series D, E, F, or G Preferred Stock, as applicable, held by the depositary. The redemption price per depositary share will be equal to 1/25th of the redemption price per share payable with respect to the Series D Preferred Stock (or $1,000 per depositary share) and 1/40th of the redemption price per share payable with respect to the Series E, F, or G Preferred Stock (or $25 per depositary share), plus any declared and unpaid dividends, without regard to any undeclared dividends.

Whenever KeyCorp redeems shares of Series D, E, F, or G Preferred Stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing shares of Series D, E, F, or G Preferred Stock so redeemed. In case of any redemption of less than all of the outstanding depositary shares, the depositary shares to be redeemed will be selected pro rata by lot or in such other manner as the Board of Directors or any duly authorized committee thereof may determine to be fair and equitable. The depositary will mail by first class mail, postage prepaid (or otherwise transmit by an authorized method) notice of redemption to record holders of the depositary receipts not less than 30 and not more than 60 days prior to the date fixed for redemption of the Series D, E, F, or G Preferred Stock and the related depositary shares.

Voting the Series D, E, F, and G Preferred Stock

Because a depositary share represents either a 1/25th interest in a share of Series D Preferred Stock or a 1/40th interest in a share of Series E, F, or G Preferred Stock, holders of depositary receipts will be entitled to either a 1/25th or 1/40th of a vote per depositary share, as applicable, under those limited circumstances in which holders of the Series D, E, F, and G Preferred Stock are entitled to a vote.

When the depositary receives notice of any meeting at which the holders of the Series D, E, F, and G Preferred Stock are entitled to vote, the depositary will mail (or otherwise transmit by an authorized method) the information contained in the notice to the record holders of the depositary shares relating to the Series D, E, F, and G Preferred Stock. Each record holder of the depositary shares on the record date, which will be the same date as the record date for the Series D, E, F, and G Preferred Stock, may instruct the depositary to vote the amount of the Series D, E, F, or

G Preferred Stock represented by the holder's depositary shares. To the extent possible, the depositary will vote the amount of the Series D, E, F, or G Preferred Stock represented by depositary shares in accordance with the instructions it receives. KeyCorp will agree to take all reasonable actions that may be deemed necessary to enable the depositary to vote as instructed. If the depositary does not receive specific instructions from the holders of any depositary shares representing the Series D, E, F, or G Preferred Stock, it will vote all depositary shares of that series held by it proportionately with instructions received.

Charges of Depositary

KeyCorp pays all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements. KeyCorp has paid, and will pay, associated charges of the depositary in connection with the initial deposit of the Series D, E, F, and G Preferred Stock and any redemption of the Series D, E, F, and G Preferred Stock. Holders of depositary receipts pay transfer, income, and other taxes and governmental charges and such other charges as are expressly provided in the applicable deposit agreement for their accounts. If these charges have not been paid by the holders of depositary receipts, the depositary may refuse to transfer depositary shares, withhold dividends and distributions, and sell the depositary shares evidenced by the depositary receipt.

Listing

As described above under "*Preferred Stock -- Exchange and Trading Symbols*," the depositary shares representing shares of Series E, F, and G Preferred Stock are listed on the NYSE.

Form of Preferred Stock and Depositary Shares

The depositary shares are issued in book-entry form through DTC. The Series D, E, F, and G Preferred Stock are issued in registered form to the depositary.

Anti-Takeover Effects of Provisions of Ohio Law and KeyCorp's Articles and Regulations

Ohio Anti-Takeover Law

Ohio law contains provisions that would make a change in control of KeyCorp more difficult or discourage a tender offer or other plans to restructure KeyCorp. The following discussion of these provisions is qualified in its entirety by reference to those particular statutory provisions.

Ohio Merger Moratorium Statute

Ohio law prohibits certain business combinations and transactions, such as mergers, consolidations, combinations or majority share acquisitions between an Ohio issuing public corporation and an "interested shareholder," including an affiliate or associate of such interested shareholder (referred to as a "Chapter 1704 transaction"), for a period of three years from the date on which a shareholder first becomes an interested shareholder unless, prior to the interested shareholder's share acquisition, the directors of the corporation approved the proposed business combination or transaction or approved the purchase of shares by the interested shareholder. An "interested shareholder" is defined generally as any person who, directly or indirectly, beneficially owns 10% or more of the outstanding voting stock of the corporation. After such three-year period, a Chapter 1704 transaction is prohibited unless certain fair price provisions are complied with, the directors of the corporation approved the purchase of shares which made the shareholder an interested shareholder, or the shareholders of the corporation approve the proposed business combination or transaction by the affirmative vote of two-thirds of the voting power of the corporation or such other percentage set forth in the articles of incorporation provided that a majority of the disinterested shareholders approve the transaction.

The Regulations provide that the affirmative vote of at least two-thirds of the Board of Directors shall be required for the approval or recommendation of a Chapter 1704 transaction, any transaction which results in the issuance or transfer by KeyCorp to any person or entity of voting stock of KeyCorp in an amount greater than 15% of the outstanding voting stock of KeyCorp before giving effect to the issuance or transfer and any transaction involving KeyCorp which has the effect, directly or indirectly, of increasing the proportionate share of the stock or securities of any class or series of KeyCorp which is owned by an interested shareholder.

Ohio Control Share Acquisition Act

Additionally, Section 1701.831 of the ORC generally prohibits transactions pursuant to which a person obtains one-fifth or more but less than one-third of all the voting power of a corporation, one-third or more but less than a majority of all of the voting power of a corporation, or a majority or more of all the voting power of a corporation (a “control share acquisition”), unless the shareholders approve the transaction at a special meeting, at which a quorum is present, by both the affirmative vote of a majority of the voting power of the corporation and by the affirmative vote of a majority of the voting power of the corporation excluding the voting power of interested shares. Pursuant to the ORC, KeyCorp has “opted out” of these provisions by providing in its Articles that Section 1701.831 of the ORC will not apply to control share acquisitions of shares of KeyCorp.

Articles and Regulations

KeyCorp’s Articles and Regulations include anti-takeover provisions that:

- authorize the Board of Directors to issue Preferred Stock in one or more series and, with respect to each series, to fix the number of shares constituting that series and establish the rights and terms of that series with limitations prescribed by the provisions of the Ohio General Corporation Law;

- require holders of at least 25% of the shares of Common Stock to call a special meeting of shareholders;

- establish advance notice procedures for shareholders to submit nominations of candidates for election to the Board of Directors or other shareholder proposals;

- allow KeyCorp’s directors to establish the size of the Board of Directors and fill vacancies on the Board of Directors created by an increase in the number of directors;

- allow the Board of Directors to fill vacancies on the Board by the affirmative vote of a majority of the directors then in office, however caused (subject to the rights of the holders of any series of Preferred Stock to fill vacancies in directors elected by such holders);

- provide that the Regulations may be amended by the Board of Directors without shareholder approval; and

- provide that the Company shall, to the fullest extent permitted by the Ohio General Corporation Law, indemnify the Company’s directors, officers and certain other covered persons against certain liabilities and losses incurred in connection with their positions or services.

Provisions of the Articles and Regulations may delay or discourage transactions involving an actual or potential change in control of KeyCorp or change in the Board of Directors or management, including transactions in which shareholders might otherwise receive a premium for their shares or transactions that shareholders might otherwise deem to be in their best interests.

Authorized and Unissued Shares

Shares of authorized and unissued Common Stock are available for future issuance at the discretion of the Board of Directors without shareholder approval except as may otherwise be required by Ohio law. The future issuance of additional authorized shares of Common Stock may, among other things, dilute the earnings per share of the Common Stock and the equity and voting rights of those holding Common Stock at the time the additional shares are issued.

The issuance of additional shares of Preferred Stock by KeyCorp could have certain anti-takeover effects under certain circumstances, and could enable the Board of Directors to render more difficult or discourage an attempt to obtain control of KeyCorp by means of a merger, tender offer, or other business combination transaction directed at KeyCorp by, among other things, placing shares of Preferred Stock with investors who might align themselves with the Board of Directors.

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Section 3: EX-10.27 (EXHIBIT 10.27)

EXHIBIT 10.27

KEYCORP DIRECTORS’ DEFERRED SHARE SUB-PLAN
(As Amended and Restated)

ARTICLE I

PURPOSE

The KeyCorp Directors' Deferred Share Sub-Plan ("Sub-Plan") was originally established as a sub-plan under the KeyCorp 2013 Equity Compensation Plan and as a successor to the KeyCorp Directors' Deferred Share Plan, adopted as of December 31, 2008 (the "Prior Plan"). The purpose of the Sub-Plan is to attract, retain and compensate highly qualified individuals to serve as Directors and to align the interests of Directors with the shareholders of the Corporation further and thereby promote the long-term success and growth of the Corporation. The Sub-Plan, as previously amended and restated, is hereby amended and restated in its entirety as set forth herein, effective as of the "Approval Date" (as defined in the KeyCorp 2019 Equity Compensation Plan), to reflect the adoption of the KeyCorp 2019 Equity Compensation Plan, as a successor to the KeyCorp 2013 Compensation Plan.

ARTICLE II

DEFINITIONS

Capitalized terms used in the Sub-Plan but not defined herein shall have the same meanings as defined in the applicable Equity Compensation Plan. In addition to those terms and the terms defined in Article I hereof, the following terms shall have the meanings hereinafter set forth, unless a different meaning is clearly required by the context:

(a) **"Account":** The meaning set forth in Section 4.3.

(b) **"Approval Date":** The meaning set forth in Article I.

(c) **"Beneficiary" or "Beneficiaries":** The person or persons designated by a Director in accordance with the Sub-Plan to receive payment of the Director's unpaid Deferred Shares and the Director's Account in the event of the death of the Director.

(d) **"Beneficiary Designation":** An agreement in substantially the form adopted and modified from time to time by the Corporation pursuant to which a Director may designate a Beneficiary or Beneficiaries.

(e) **"Change of Control":** Notwithstanding any provision of the Equity Compensation Plan, a Change of Control shall be deemed to have occurred if and only if, under any rabbi trust arrangement maintained by the Corporation (the "Trust"), as such Trust may from time to time be amended or substituted, the Corporation is required to fund the Trust to secure the payment of any Deferred Shares or Account balances because a "Change of Control," as defined in the Trust, has occurred on or after the effective date of the Sub-Plan; provided that the Change of Control transaction also constitutes the occurrence of a "change in the ownership," a "change in the effective control" or a "change in the ownership of a substantial portion of the assets" of the Corporation within the meaning of Section 409A of the Code.

(f) **"Change of Control Election":** The meaning set forth in Section 6.1.

(g) **"Deferral Period":** The meaning set forth in Section 3.2(a).

(h) **"Deferred Shares":** A right to receive Common Shares or the equivalent cash value thereof granted pursuant to the Equity Compensation Plan and Article III of this Sub-Plan.

(i) **“Election Agreement”:** The written election to defer payment of Fees and/or Deferred Shares in accordance with Section 3.2(b) or Article IV signed in writing by the Director and in the form provided by the Corporation. Election Agreements shall be irrevocable.

(j) **“Equity Compensation Plan”:** the KeyCorp 2013 Equity Compensation Plan, the KeyCorp 2019 Equity Compensation Plan, or any successor equity compensation plan maintained by the Corporation and approved by its shareholders, as applicable, as in effect at the time an award of Deferred Shares is granted hereunder (or at such other time as may be relevant for purposes of this Sub-Plan).

(k) **“Fees”:** The fees earned as Director.

(l) **“Nominating and Corporate Governance Committee”:** The Nominating and Corporate Governance Committee of the Board or any successor committee designated by the Board.

(m) **“Participant”:** Any Director who has at any time elected to defer the receipt of his or her Fees and/or Deferred Shares in accordance with the terms of the Sub-Plan.

(n) **“Retainer”:** The portion of a Director’s annual cash compensation that is payable on a current basis without regard to the number of Board or committee meetings attended or committee positions.

(o) **“Second Director Plan”:** The KeyCorp Second Director Deferred Compensation Plan, as the same may be amended from time to time.

(p) **“Settlement Date”:** The date on which the three-year Deferral Period with respect to an award of Deferred Shares ends, provided that the Director has not elected to defer payment of his or her Deferred Shares pursuant to Section 3.2(b).

(q) **“Year”:** The calendar year.

ARTICLE III

ANNUAL DEFERRED SHARE AWARDS

3.1 Annual Awards. Each Director shall receive an annual award of Deferred Shares. The number of Deferred Shares to be awarded shall be equal to a number of Common Shares having an aggregate Fair Market Value as of the date of the award equal to 200% of the Director’s Retainer, unless a lesser number of Deferred Shares is determined by the Nominating and Corporate Governance Committee. To the extent that the application of any formula in computing the number of Deferred Shares to be granted would result in fractional shares of stock, the number of shares shall be rounded down to the nearest whole share. Unless the Nominating and Corporate Governance Committee from time to time determines another date for the annual award due to unusual circumstances or otherwise, beginning with the annual award made during 2014, such annual award shall be made on the day of the Corporation’s annual meeting of shareholders, in accordance with the Corporation’s normal equity granting policies and only to those Directors serving as of the conclusion of such annual meeting. At the time of making the annual award, the Nominating and Corporate Governance Committee shall determine, in its sole discretion, whether Deferred Shares shall be payable in the form of Common Shares (with fractional shares being rounded down to the nearest whole share), cash, or a combination of Common Shares and cash.

3.2 Deferral Period.

(a) Minimum Three-Year Deferral Period. Each grant of Deferred Shares shall be subject to a required deferral period (a "Deferral Period") beginning on the Deferred Shares' grant date and ending on the earlier of the third anniversary of such grant date or the date of the Corporation's annual meeting of shareholders that occurs in the third Year following the Year in which such grant date occurs (the "Vesting Date"); provided, however, that the Deferral Period will end (and the Deferred Shares will become fully vested) prior to the Vesting Date (i) in the event of a Change of Control pursuant to a Director's Change of Control Election as provided in Section 6.1(a); (ii) if the Director dies; or (iii) if the Director's service as a Director is terminated (unless the termination follows a Change of Control and the Director has elected in a Change of Control Election to receive his or her Deferred Shares pursuant to Section 6.1(c)).

(b) Directors' Option to Defer Payment of Deferred Shares. Notwithstanding Section 3.2(a), a Director may elect, during the period specified by the Corporation in accordance with this Section 3.2(b) and Section 409A of the Code, to defer the payment of his or her Deferred Shares. Any deferral election pursuant to this Section 3.2(b) shall specify (x) the date on which the Deferred Shares shall be distributed, which shall be the first day of a calendar quarter commencing after the end of the Deferral Period, (y) whether the distribution of Deferred Shares is to be paid in its entirety or whether Deferred Shares shall be paid in installments, and (z) if in installments, the number of annual installments (not to exceed 10). Deferred Shares being deferred pursuant to this Section 3.2(b) will be paid in the form (cash or Common Shares) originally granted. Any deferral of Deferred Shares pursuant to an election under this Section 3.2(b) will become effective at the conclusion of the applicable Deferral Period.

(i) With respect to any Deferred Shares granted after 2013, any such election shall be made no later than December 31 of the Year ending immediately prior to the Year in which the Deferred Shares are granted and shall result in the crediting of the applicable Deferred Shares to the Director's Account maintained under Article IV of this Sub-Plan.

(ii) With respect to any Deferred Shares granted prior to 2014, any such election shall be made no later than twelve full calendar months prior to the close of the applicable Deferral Period and shall result in the transfer of the applicable Deferred Shares into the Common Shares Account maintained for the Director under the Second Director Plan or the Director's Account maintained under Article IV of this Sub-Plan, as the case may be.

(c) Evergreen Deferral Election. Once a Director elects under Section 3.2(b) of this Sub-Plan to defer Deferred Shares into his or her Account maintained under Article IV of this Sub-Plan (or, as applicable, to transfer such Deferred Shares into the Common Shares Account maintained for the Director under the Second Director Plan), his or her deferral election will continue to be effective from Year to Year to the extent provided in this Section 3.2(c).

(i) Any election with respect to Deferred Shares granted after 2013 will continue to be effective from Year to Year with respect to Deferred Shares granted after such Year and the Deferred Shares granted in subsequent Years will also be credited to the Director's Account maintained under Article IV of this Sub-Plan in accordance with such election, unless and until the election is revoked or modified, on a form provided by the

Corporation, in accordance with this Section 3.2(c)(i). To revoke or modify an evergreen deferral election under this Section 3.2(c)(i) with respect to Deferred Shares otherwise granted in a particular Year, the Director's revocation or modification of his or her evergreen election shall be delivered to the Corporation during the period specified by the Corporation and no later than December 31 of the Year ending immediately prior to the Year in which the Deferred Shares are granted.

(ii) Any election with respect to Deferred Shares granted prior to 2014 will continue to apply to such Deferred Shares for which the applicable three-year Deferral Period lapses after 2013, and such Deferred Shares will be transferred to the Director's Common Shares Account maintained under the Second Director Plan in accordance with such election, unless and until the election is revoked or modified, on a form provided by the Corporation, in accordance with this Section 3.2(c)(ii). No such election shall have any effect upon Deferred Shares granted after 2013. To revoke or modify an evergreen deferral election under this Section 3.2(c)(ii) with respect to Deferred Shares otherwise granted in a particular Year, the Director's revocation or modification of his or her evergreen election shall be delivered to the Corporation during the period specified by the Corporation and no later than twelve full calendar months prior to the date on which the applicable Deferral Period ends.

(d) No Rights During Deferral Period. During the Deferral Period, the Director shall have no right to transfer any rights under his or her Deferred Shares and shall have no other rights of ownership therein.

3.3 Dividend Equivalents. Each award of Deferred Shares will provide for dividend equivalents, such that, on the date of the Corporation's dividend payment, each participating Director will be credited with a number of additional Deferred Shares (including fractional shares) equal to the amount of cash dividends paid by the Corporation on the number of outstanding Deferred Shares divided by the Fair Market Value of one Common Share on that date. Such dividend equivalents, which shall likewise be credited with dividend equivalents, shall be deferred until the end of the Deferral Period for the Deferred Shares with respect to which the dividend equivalents were credited and, if the Director has so elected, pursuant to Section 3.2(b), such dividend equivalents shall be credited to the Director's Account maintained under Article IV of this Sub-Plan.

3.4 Payment of Deferred Share Awards. Except as otherwise provided pursuant to a Director's election to defer payment of his or her Deferred Shares in accordance with Section 3.2(b), each Director's Deferred Shares (including dividend equivalents) shall be shall be paid after the conclusion of the applicable Deferral Period in accordance with this Section 3.4.

(a) Settlement Date. A Director, or in the event of such Director's death, his or her Beneficiary, shall be entitled to payment of such Director's Deferred Shares following such Director's Settlement Date.

(b) Time and Form of Distribution. As soon as practicable following the Settlement Date, but in no event later than 90 days following the Director's Settlement Date, the Corporation shall pay each outstanding award of Deferred Shares to the Director or, in the case of the death of the Director, his or her Beneficiary. Such distribution shall be made in a lump sum in the form determined pursuant to Section 3.1. If payment of Deferred Shares is made in the form of Common Shares, the Corporation will provide procedures to facilitate the sale of such Common Shares following distribution upon the request of the Director. If payment of Deferred Shares is made in cash, the amount distributed shall be equal to the Fair Market Value on the Settlement Date.

(d) Fractional Shares. The Corporation will not be required to issue any fractional Common Shares pursuant to this Sub-Plan.

3.5 Shares Subject to Sub-Plan. The Common Shares which may be delivered to Directors upon payment of their Deferred Shares shall be issued or delivered under the Equity Compensation Plan. Any Common Shares delivered to Directors by a trust that is treated as a "grantor trust" within the meaning of Sections 671-679 of the Code shall be treated as delivered by the Corporation pursuant to this Sub-Plan.

3.6 Adjustments. The number of Deferred Shares granted to a Director hereunder, and the kind of shares covered thereby, are subject to adjustment upon certain corporate events as provided in the Equity Compensation Plan.

3.7 Death of a Director. Notwithstanding anything to the contrary contained in this Sub-Plan, and except in the case of Deferred Shares deferred pursuant to Section 3.2(b), in the event of the death of a Director, the three-year Deferral Period will be deemed to have ended, and the Settlement Date will be deemed to have occurred, on the date of the Director's death. The Director's Deferred Shares shall be paid as soon as practicable following the Settlement Date, but in no event later than 90 days following the Settlement Date, to the Beneficiary or Beneficiaries designated on the Director's Beneficiary Designation or, if no such designation is in effect or no Beneficiary is then living, then to the Director's estate.

ARTICLE IV

DEFERRAL OF FEES; ACCOUNTS

4.1 Election to Defer Fees. Any Director may elect to defer (i) payment of his receipt of all or a specified portion of his or her Fees for any Year in accordance with this Section 4.1 with such deferred Fees deemed invested in KeyCorp Common Shares. A Director who desires to defer the payment of all or a portion of his or her Fees for any Year must complete and deliver an Election Agreement to the Corporation during the period specified by the Corporation and no later than the last day of the Year prior to the Year in which the Fees will be earned by the Director; provided, however, that any Director hereafter elected to the Board of Directors of the Corporation or a subsidiary who was not previously a Participant in the Sub-Plan may make an election to defer the payment of Fees for the Year in which he or she is elected to the Board of Directors by delivering the Election Agreement to the Corporation within 30 days of first becoming a Director (or during such shorter period as may be specified by the Corporation), with any such Election Agreement being effective with respect to Fees earned commencing after the date that the Election Agreement becomes irrevocable.

4.2 Amount of Fees Deferred; Date of Deferral. A Participant shall designate on the Election Agreement (a) the amount of his or her Fees that are to be deferred under this Sub-Plan for any Year, (b) the date on which the deferred Fees shall be distributed, (c) whether the distribution of deferred Fees is to be paid in its entirety or whether such Fees shall be paid in installments, and (d) if in installments, the number of annual installments (not to exceed 10). Deferrals shall be until the earlier to occur of: (x) the date specified by the Participant, or (y) the date of death of the Participant, at which time payment of the amount deferred shall be made in accordance with Section 4.4 or Section 6.1. A Participant may not select more than one date in each Election Agreement upon which distribution shall be made or when installments shall begin. Distribution dates shall be the first business day of a calendar quarter.

4.3 Account. The Corporation shall maintain a bookkeeping account for each Participant to which shall be credited (a) the amount of Fees deferred by the Participant pursuant to this Article IV, (b) the Deferred Shares deferred by the Participant pursuant to Section 3.2(b) of this Sub-Plan, and (c) dividend equivalents credited in accordance with this Sub-Plan (an "Account"). All amounts credited to a Director's Account shall be credited in the form of notional Common Shares. With respect to deferred Fees, as of the last business day of any quarter, there shall be added to each Account the number of Common Shares (whole and fractional, rounded to the nearest one-hundredth of a share) equal to the dollar amount of deferred Fees payable for such quarter plus all dividends payable during such quarter on the Common Shares credited to the Account on the first day of such quarter divided by the Fair Market Value of the Common Shares at the close of business on the last business day of such quarter.

4.4 Payment of Account; Period of Deferral. The balance of a Participant's Account shall be paid to the Participant in a single payment and/or in a number of individual, substantially equal consecutive annual installments (not to exceed 10), as elected by the Participant in his or her Election Agreement. Distributions of deferred Fees shall be made in Common Shares, and distributions of deferred Deferred Shares shall be made as described in Section 3.2(b). The amount of the Account remaining after payment of each individual installment shall continue to be valued in accordance with Section 4.5 of this Article. Full payment or the first annual installment, as the case may be, shall be made in accordance with the terms of the Participant's Election Agreement as soon as administratively practicable following the Participant's designated payment date, but in any event no later than 90 days following the date (i) on which the Participant has elected to commence distribution of his or her Account, or (ii) of the Participant's death. Any installment payment shall be made pro rata.

The election as to the time for and method of payment of the amount of the Account relating to Fees deferred for a particular Year shall be made on the Election Agreement(s) and thereafter shall not be altered except as provided in Article VI of this Sub-Plan.

In the event that a Participant elects to receive installment payments under this Section 4.4,

(a) the amount of the distribution from the Account shall be valued based on the Fair Market Value of the Common Shares on the last business day of the quarter immediately prior to the distribution date, and

(b) the amount of each installment shall be determined by dividing the value of the Account by the number of installments remaining to be paid to the Participant.

4.5 Valuation of the Account. Each Participant's Account shall be valued as of the last day of each quarter until payment of the Participant's Account is made in full. The Corporation shall ascertain the number of shares in the Account (whole and fractional, rounded to the nearest one-hundredth of a share) after taking into account dividend equivalents credited to the Account and deemed reinvested in Common Shares and distributions from the Account under this Article, based on the Fair Market Value of the Common Shares on the last business day of such quarter. Automatically and without further action by the Corporation, in the event of any stock dividend or split, recapitalization, merger, consolidation, spin-off, reorganization, combination, exchange of shares, or a similar corporate change, appropriate adjustments in the number and kind of shares credited to a Participant's Account shall be made by the Corporation to reflect such change.

4.7 Statement. Each Participant shall receive a statement of his or her Account not less than annually.

4.8 Change of Control.

(a) Adjustments. Notwithstanding any other provision of the Sub-Plan to the contrary, in the event of a Change of Control, no amendment or modification of this Sub-Plan may be made at any time on or after such Change of Control (i) to reduce or modify a Participant's Pre-Change of Control Account Balance, (ii) to reduce or modify the method of calculating all earnings, gains, and/or losses on a Participant's Pre-Change of Control Account Balance, or (iii) to reduce or modify the Participant's deferrals to be credited to the Participant's Account for the applicable deferral period. For purposes of this Section 4.8, the term “Pre-Change of Control Account Balance” shall mean, with regard to any Participant, the aggregate amount of such Participant’s prior deferrals with all earnings, gains, and losses thereon which are credited to the Participant’s Account through the close of the Year in which such Change of Control occurs.

(b) Common Stock Conversion. In the event of a Change of Control in which the Common Shares of the Corporation are converted into or exchanged for securities, cash and/or other property as a result of any capital reorganization or reclassification of the capital stock of the Corporation, or as a result of the consolidation or merger of the Corporation with or into another corporation or entity, or the sale of all or substantially all of its assets to another corporation or entity, the Corporation shall cause each Participant’s Account to reflect the securities, cash and other property to be received in such reorganization, reclassification, consolidation, merger or sale on the balance in the Account and, from and after such reorganization, reclassification, consolidation, merger or sale, the Account shall reflect all dividends, interest, earnings and losses attributable to such securities, cash, and other property.

(c) Amendment in the Event of a Change of Control. On or after a Change of Control, the provisions of this Article IV may not be amended or modified as such provisions apply to the Participants’ Pre-Change of Control Account Balances.

4.10 Death of a Participant. In the event of the death of a Participant, the amount of the Participant’s Account shall be paid to the Beneficiary or Beneficiaries designated in writing signed by the Participant in the form provided by the Corporation; in the event there is more than one Beneficiary, such form shall include the proportion to be paid to each Beneficiary and indicate the disposition of such share if a Beneficiary does not survive the Participant; in the absence of any such designation, payment from the Account shall be divided equally among all other Beneficiaries. Unless a Participant elects otherwise, in the event of the Participant’s death after December 31, 2014, payment of the Participant’s Account shall be made in a single lump sum to the Participant’s Beneficiary(ies).

ARTICLE V

BENEFICIARY DESIGNATION

5.1 Beneficiary Designation. Each Director shall have the right, at any time, to designate one or more persons or an entity as Beneficiary (both primary as well as secondary) to whom benefits under this Sub-Plan shall be paid in the event of the Director’s death prior to payment of the Director’s Deferred Shares or the Director’s Account. Each Beneficiary Designation shall be in a written form prescribed by the Corporation and shall be effective only when filed with the Corporation during the Director’s lifetime.

5.2 Changing Beneficiary. Any Beneficiary Designation may be changed by the Director without the consent of the previously named Beneficiary by the Director’s filing of a new Beneficiary Designation with the Corporation. The filing of a new Beneficiary Designation shall cancel all Beneficiary Designations previously filed by the Director.

ARTICLE VI

ACCELERATION

6.1 Change of Control. Notwithstanding anything to the contrary contained in this Sub-Plan or the Equity Compensation Plan, upon the occurrence of a Change of Control, a Director shall be entitled to receive from the Corporation the payment of his or her Deferred Shares and the balance of his or her Account in the manner selected as follows: not later than 30 calendar days after the date a person first becomes a Director, a Director shall be entitled to make an election which will be applicable in the event of a Change of Control (the "Change of Control Election"). For purposes of clarity, notwithstanding any other provision of the Sub-Plan to the contrary, a Director's Change of Control Election in effect immediately prior to September 18, 2013 shall continue in effect on and after such date. The Change of Control Election will provide the following payment alternatives to a Director in the event of a Change of Control:

(a) upon the occurrence of a Change of Control, the entire amount of the Director's Deferred Shares and the balance of the Director's Account will be immediately paid in full, regardless of whether the Director continues as a Director after the Change of Control;

(b) upon and after the occurrence of a Change of Control and in accordance with Section 3.2(a), the entire amount of the Director's Deferred Shares and the balance of the Director's Account will be immediately paid in full if and when the Director's service as a Director is terminated within two years after the Change of Control; or

(c) upon the occurrence of a Change of Control, the payment elections specified by the Director prior to the Change of Control shall govern irrespective of the Change of Control.

6.2 Hardship. In the event of an unforeseeable emergency, the Corporation may accelerate the payment of all or any portion of the Director's Deferred Shares and the Director's Account to the Director, but only up to the amount necessary to meet the emergency. For purposes of this Section 6.2, the term "unforeseeable emergency" shall mean a severe financial hardship to the Director resulting from a sudden and unexpected illness or accident of the Director, the Director's spouse, or the Director's dependent (as defined in Section 152 of the Code, without regard to Section 152(b)(1), (b)(2), and (d)(1)(B)), the loss of the Director's property due to casualty, or such other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Director. The determination of an unforeseeable emergency and the ability of the Corporation to accelerate payment of the Director's Deferred Shares and the Director's Account shall be determined in accordance with the requirements of Section 409A of the Code and the applicable regulations issued thereunder. Payment of the Director's Deferred Shares and the Director's Account shall be limited only to such amount as is necessary to satisfy the emergency, which shall include all applicable taxes owed or to be owed by the Director as a result of the distribution.

6.3 Small Accounts. Notwithstanding any other provision of this Sub-Plan, the Corporation may, to the extent permitted under Section 409A of the Code, accelerate payment of a Director's Account if, at any time, the balance of the Director's Account (and the value of any other nonqualified deferred compensation arrangement that is aggregated with the Director's Account under Treasury Regulation Section 1.409A-1(c)) is less than or equal to the applicable dollar amount then in effect under Section 402(g)(1)(B) of the Code.

ARTICLE VII

ADMINISTRATION, AMENDMENT AND TERMINATION

7.1 Administration. Notwithstanding any provision of the Equity Compensation Plan, the Sub-Plan shall be administered by the Corporation. The Corporation shall have such powers as may be necessary to discharge its duties hereunder. The Corporation may, from time to time, employ, appoint or delegate to an agent or agents (who may be an officer or officers of the Corporation) and delegate to them such administrative duties as it sees fit, and may from time to time consult with legal counsel who may be counsel to the Corporation. No agent appointed by the Corporation to perform administrative duties hereunder shall be liable for any action taken or determination made in good faith. All elections, notices and directions under the Sub-Plan by a Director shall be made on such forms as the Corporation shall prescribe.

7.2 **Amendment and Termination**. Notwithstanding any provision of the Equity Compensation Plan, the Nominating and Corporate Governance Committee may alter or amend this Sub-Plan from time to time or may terminate it in its entirety; provided, however, that no such action, except for an acceleration of benefits, shall, without the consent of a Director, impair the Director's rights with respect to the amount credited to the Director's Account or with respect to any Deferred Shares issued or to be issued to such Director under the Sub-Plan; and further provided, that any amendment that must be approved by the shareholders of the Corporation in order to comply with applicable law or the rules of the principal exchange upon which the Common Shares are traded or quoted shall not be effective unless and until such approval has been obtained in compliance with such applicable law or rules. Presentation of this Sub-Plan or any amendment hereof for shareholder approval shall not be construed to limit the Corporation's authority to offer similar or dissimilar benefits through plans or other arrangements that are not subject to shareholder approval unless otherwise limited by applicable law or stock exchange rules.

ARTICLE VIII

FINANCING OF BENEFITS

8.1 **Financing of Benefits**. The Deferred Shares and the balance of a Director's Account payable under the Sub-Plan to a Director or, in the event of his or her death, to his or her Beneficiary, shall be paid by the Corporation from its general assets, including treasury shares. The right to receive payment of the Deferred Shares or an Account balance represents an unfunded, unsecured obligation of the Corporation.

8.2 **Security for Benefits**. Notwithstanding the provisions of Section 8.1, nothing in this Sub-Plan shall preclude the Corporation from setting aside Common Shares or funds in a so-called "grantor trust" pursuant to one or more trust agreements between a trustee and the Corporation. However, no Director or Beneficiary shall have any secured interest or claim in any assets or property of the Corporation or any such trust and all Common Shares or funds contained in such trust shall remain subject to the claims of the Corporation's general creditors.

ARTICLE IX

GENERAL PROVISIONS

9.1 **Governing Law**. The provisions of this Sub-Plan shall be governed by and construed in accordance with the laws of the State of Ohio.

9.2 **Shareholder Approval**. Notwithstanding the foregoing provisions of the Sub-Plan, no Common Shares shall be issued or transferred pursuant to the Sub-Plan before the date of the approval of the applicable Equity Compensation Plan by the Corporation's shareholders.

9.3 **Miscellaneous**. Headings are given to the sections of this Sub-Plan solely as a convenience to facilitate reference. Such headings, numbering and paragraphing shall not in any case be deemed in any way material or relevant to the construction of this Sub-Plan or any provisions thereof.

9.4 **No Right to Continue as Director**. Neither the Sub-Plan, nor the granting of Deferred Shares nor any other action taken pursuant to the Sub-Plan, shall constitute or be evidence of any agreement or understanding, express or implied, that a Director has a right to continue as a Director for any period of time, or at any particular rate of compensation.

9.5 **Compliance with Section 409A Requirements**. The Sub-Plan is intended to provide for the deferral of compensation in accordance with the provisions of Section 409A of the Code and regulations and published guidance issued pursuant thereto. Accordingly, the Sub-Plan shall be administered in a manner consistent with those provisions. Notwithstanding any provision of the Sub-Plan to the contrary, no otherwise permissible election, deferral, accrual, transfer or distribution shall be made or given effect under the Sub-Plan that would result in a violation of Section 409A of the Code.

9.6 **Elections Under Prior Plan**. Each Director's Account hereunder shall remain subject to the same Change of Control elections, elections under Section 4.2(b) of the Prior Plan that are described in Sections 3.2(b)(ii) and 3.2(c)(ii) of this Sub-Plan to transfer the Deferred Shares to the Director's Common Shares Account under the Second Director Plan, and Beneficiary Designations that were controlling under the Prior Plan immediately prior to the approval of the KeyCorp 2013 Equity Compensation Plan by the Corporation's shareholders for the remainder of the period or periods for which such elections or designations are by their original terms applicable or, in the case of Beneficiary Designations and elections under Section 4.2(b) of the Prior Plan that are described in Sections 3.2(b)(ii) and 3.2(c)(ii) of this Sub-Plan, until such time as such designations and elections are revoked or modified or otherwise cease to be effective in accordance with this Sub-Plan.

ARTICLE X

MERGER OF FIRST NIAGARA DIRECTOR PLAN

14.1 **Merger of First Niagara Plan**. Effective December 31, 2016, (a) the Amended and Restated First Niagara Bank and First Niagara Financial Group, Inc. Directors Deferred Fees Plan (the "First Niagara Plan") shall be merged into the Sub-Plan and thereby terminated, (b) all participants in the First Niagara Plan immediately prior to such time ("First Niagara Participants") will automatically participate in the Sub-Plan, and the rights and obligations of First Niagara Participants under the First Niagara Plan shall automatically be extinguished and shall become rights and obligations under the Sub-Plan.

14.2 **First Niagara Plan Accounts**. The Corporation shall establish a separate sub-Account (a "First Niagara Account") under the Sub-Plan for each First Niagara Participant, to which shall be credited (a) a number of notional Common Shares (whole and fractional, rounded to the nearest one-hundredth of a share) determined by dividing the balance of such First Niagara Participant's accounts under the First Niagara Plan immediately prior to its merger into the Sub-Plan by the Fair Market Value of one Common Share, and (b) dividend equivalents on the notional Common Shares credited to the First Niagara Account and deemed reinvested in Common Shares. The amount properly credited to a First Niagara Participant's First Niagara Account at any time shall be referred to as the First Niagara Participant's "First Niagara Plan Benefits".

14.3 **Certain Terms Applicable to First Niagara Plan Benefits**. Except as otherwise provided in this Article XIV, First Niagara Plan Benefits shall be subject to the terms and conditions of the Sub-Plan. In particular, and notwithstanding any other provision of the Sub-Plan to the contrary:

(a) All First Niagara Plan Benefits shall be payable only at the time and in the form provided pursuant to applicable payment election made under the First Niagara Plan and the terms of the First Niagara Plan, each as in effect immediately prior to the merger of the First Niagara Plan into the Sub-Plan.

(b) The provisions of Sections 3.4, 4.4 and 6.1 of the Sub-Plan shall not apply to First Niagara Benefits.

(c) Any beneficiary designation made by a First Niagara Participant under the First Niagara Plan and in effect immediately prior to the merger of the First Niagara Plan into the Sub-Plan shall continue to apply under the Sub-Plan with respect to the First Niagara Participant's First Niagara Benefits, unless and until changed in accordance with Article V of the Sub-Plan.

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Section 4: EX-21 (EXHIBIT 21)

EXHIBIT 21

KEYCORP
SUBSIDIARIES OF THE REGISTRANT AT DECEMBER 31, 2019

Subsidiaries [a]	Jurisdiction of Incorporation or Organization	Parent Company
KeyBank National Association	United States	KeyCorp

(a) *Subsidiaries of KeyCorp other than KeyBank National Association are not listed above since, in the aggregate, they would not constitute a significant subsidiary. KeyBank National Association is 100% owned by KeyCorp.*

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Section 5: EX-23 (EXHIBIT 23)

EXHIBIT 23

Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements of KeyCorp:

Form S-3 No. 333-55959
Form S-3 No. 333-59175
Form S-3 No. 333-64601
Form S-3 No. 333-76619
Form S-3 No. 333-218629
Form S-8 No. 333-49609
Form S-8 No. 333-70669
Form S-8 No. 333-107074
Form S-8 No. 333-107075
Form S-8 No. 333-107076
Form S-8 No. 333-112225
Form S-8 No. 333-116120
Form S-8 No. 333-167093
Form S-8 No. 333-188703
Form S-8 No. 333-208272
Form S-8 No. 333-231689

of our reports dated February 26, 2020, with respect to the consolidated financial statements of KeyCorp and the effectiveness of internal control over financial reporting of KeyCorp included in this Annual Report (Form 10-K) of KeyCorp for the year ended December 31, 2019.

Ernst + Young LLP

Cleveland, Ohio

February 26, 2020

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Section 6: EX-24 (EXHIBIT 24)

KEYCORP
POWER OF ATTORNEY

Each of the undersigned, an officer, a director, or both of KeyCorp, an Ohio corporation, hereby constitutes and appoints Craig T. Beazer and Carrie A. Benedict, and each of them, as his or her true and lawful attorney-in fact with full power of substitution and resubstitution, to sign in his or her name, place, and stead and to file with the United States Securities and Exchange Commission in accordance with Securities Exchange Act of 1934, as amended, KeyCorp's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, and all exhibits, amendments and supplements thereto, with full power and authority to take such actions that the attorney-in-fact deems necessary in connection with the execution and filing of such Annual Report on Form 10-K.

This Power of Attorney may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

* * * * *

IN WITNESS WHEREOF, the undersigned has hereto set his or her hand as of February 26, 2020.

/s/ Beth E. Mooney	/s/ Donald R. Kimble
Beth E. Mooney Chairman and Chief Executive Officer, and Director (Principal Executive Officer)	Donald R. Kimble Chief Financial Officer (Principal Financial Officer)
/s/ Douglas M. Schosser	/s/ Bruce D. Broussard
Douglas M. Schosser Chief Accounting Officer (Principal Accounting Officer)	Bruce D. Broussard, Director
/s/ Charles P. Cooley	/s/ Gary M. Crosby
Charles P. Cooley, Director	Gary M. Crosby, Director
/s/ Alexander M. Cutler	/s/ H. James Dallas
Alexander M. Cutler, Director	H. James Dallas, Director
/s/ Elizabeth R. Gile	/s/ Ruth Ann M. Gillis
Elizabeth R. Gile, Director	Ruth Ann M. Gillis, Director
/s/ William G. Gisel, Jr.	/s/ Christopher M. Gorman
William G. Gisel, Jr., Director	Christopher M. Gorman, Director
/s/ Carlton L. Highsmith	/s/ Richard J. Hipple
Carlton L. Highsmith, Director	Richard J. Hipple, Director
/s/ Kristen L. Manos	/s/ Barbara R. Snyder
Kristen L. Manos, Director	Barbara R. Snyder, Director
/s/ David K. Wilson	
David K. Wilson, Director	

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Section 7: EX-31.1 (EXHIBIT 31.1)

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002

I, Beth E. Mooney, certify that:

1. I have reviewed this quarterly report on Form 10-Q of KeyCorp;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal 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 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: February 26, 2020

Beth E. Mooney

Beth E. Mooney
Chairman, Chief Executive Officer and President

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Section 8: EX-31.2 (EXHIBIT 31.2)

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002

I, Donald R. Kimble, certify that:

1. I have reviewed this quarterly report on Form 10-Q of KeyCorp;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal 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 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: February 26, 2020

Donald R. Kimble
Chief Financial Officer

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Section 9: EX-32.1 (EXHIBIT 32.1)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. 1350, the undersigned officer of KeyCorp (the “Company”) hereby certifies that the Company’s Quarterly Report on Form 10-Q for the quarter ended December 31, 2019 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 26, 2020

Beth E. Mooney
Chairman, Chief Executive Officer and President

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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Section 10: EX-32.2 (EXHIBIT 32.2)

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. 1350, the undersigned officer of KeyCorp (the “Company”) hereby certifies that the Company’s Quarterly Report on Form 10-Q for the quarter ended December 31, 2019 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 26, 2020

Donald R. Kimble
Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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